



# Joy Carpets & Co.

## INSTALLATION INSTRUCTIONS

### TUFTED BROADLOOM, PATTERNED, NON-PATTERNED AND ATTACHED CUSHION

Joy Carpets strongly recommends the use of a Certified Installation Contractor to install all broadloom products. Installation contractors certified by the Floor Covering Installation Board (FCIB) as well as firms that can document the employment of installers certified by the International Certified Floor-Covering Installers Association (CFI) at the R2, C2 or master level are also recognized as sources of good quality installation labor.

Except where exceeded or modified by this instruction, Joy Carpets recognizes CRI documents 104 (Commercial) and 105 (Residential) as the standard for the installation of its products.

**NOTICE** – Dealer and/or installer must inspect carpet prior to installation. Joy Carpets cannot be responsible for visible defects after carpet has been cut and installed.

#### **STRETCH –IN (OVER CUSHION) INSTALLATION:**

As in all broadloom carpet installations, lay the carpet flat, remove wrinkles and allow the carpet to condition sufficiently at room temperature, which should not be less than 65 degrees F (18°C). Extra effort will be required to stretch the carpet if installed below 65 degrees F (18°C). Carpet should be maintained after installation between 65° and 85°F (18° to 30°C). Drastic changes in temperature and humidity can cause wrinkling in installed carpet.

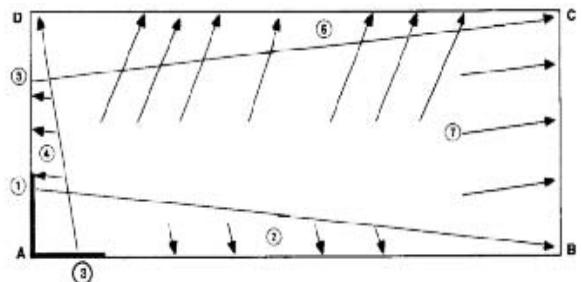
#### **STRETCH THE CARPET:**

- Stretch synthetic-backed (ActionBac®) carpet more than jute-backed carpet. Don't worry about overstretching.
- Stretch selvage-to-selvage just as much as end-to-end.
- Stretch at least 1% in both directions. (Length and width).
- A good rule of thumb is to stretch 1½ inches per 12 feet (3.81cm per 3.66m)
- See the seven-step stretching procedure below.

#### **STRETCHING AND HOOKING PROCEDURE:**

Below is a 7-step technique for successfully power stretching a room. (See diagram).

1. Using a knee kicker, hook carpet in corner A as indicated by heavy lines and power stretch from A to B at a 15° angle. Hook carpet in corner B.
2. Using a knee kicker, hook wall AB firmly onto the tack strip working from A to B at a slight angle.



3. Power stretch from wall AB into corner D at a 15° angle. Hook carpet in corner D.
4. Using a knee kicker, hook wall AD firmly onto the tack strip.
5. Power stretch from wall AD into corner C at a 15° angle. Hook carpet in corner C. Note: This is a temporary tensioning stretch, which allows stretching into wall DC.
6. Power stretch from wall AB into wall DC working at a 15° angle toward corner C. Stretcher head should be moved no more than 2 head widths between each successive stretch. Approximately 2 to 3 stretches before reaching corner C, unhook the tensioning stretch taken in step 5 and complete stretching into corner C.
7. Power stretch from wall AD to wall BC working towards corner C at a slight angle.

**Caution:** Make sure carpet is uniformly stretched at least 1% in both directions. To aid you, we suggest you chalk (white chalk) a line across the carpet close to the wall and measure the distance this mark travels toward the wall.

**Note:** Carpet stretched in over existing carpet is not recommended or guaranteed. In large areas the use of a commercial stretcher is recommended (Roberts 10-222 Senior Stretcher). Large areas should be subdivided into smaller roughly rectangular areas with each area stretched as described above.

#### **CUSHION RECOMMENDATIONS:**

**RESIDENTIAL:** – Maximum Thickness is 7/16” or 11.2mm (nominal) regardless of type cushion chosen.

- Bonded Polyurethane: Minimum Density - 6.5#/cu.ft.
- Prime and “densified prime” Polyurethane- Minimum Density – 2.8#/cu. ft.
- Needled Synthetic(felt)-Minimum Density 32 oz./sq. yd.(1.1 Kg/sq. meter)

#### **COMMERCIAL:**

- Needled Synthetic-Minimum Density – 40 oz./sq. yd. (1.35 Kg/sq. meter Maximum Thickness – 3/8” (9.5mm)
- Slab Rubber (vulcanized synthetic rubber such as Tred Mor®). Minimum Density – 18#/cu.ft. Maximum Thickness - ¼” (6.4mm)

**Note:** Improper cushion is a leading cause of re-stretch callbacks, seam failure, unsatisfactory carpet performance and poor appearance retention.

#### **SEAMING PROCEDURE:**

1. All methods of seaming are acceptable. However, the thermoplastic or “hot melt” method gives the strongest seam in the least amount of time and is the recommended procedure.

Wider 6” (15cm) tapes are available where seam peaking is a concern. Always use a premium quality seaming tape.

2. The following seaming tapes are recommended:

- Super 3 (Stretch-in only) and K-80 for direct and “double stick” – Orcon Corp – 510 489 8100

- GT-350 (Stretch-in only) – Roberts Consolidated Industries (a QEP Company) – 800 423 6545

Seaming iron should be equipped with a heat shield to prevent damage to backing and face yarns. Seams should be made on a hard flat surface. All cut edges **MUST** be sealed. Milliken “Barrier Bond” seam sealer is recommended. This product is packaged in 8 ounce squeeze bottles with a standard “Yorker” tip. One (1) case is the minimum order. Each 8-ounce bottle will cover 200 linear feet of seam. Thermoplastic chemistry is also an acceptable method for preparing/sealing seam edges. This can be accomplished using a number of available hot melt guns and applicator tips designed for this purpose. Gundlach – 618 233 1781 and Orcon (#above) are the most widely available sources for this technology.

#### **CUTTING PROCEDURE:**

- For cut pile non-patterned carpet, the preferred method of cutting is to row cut both breadths. However, on tufted carpet the rows are occasionally not straight enough to allow this. If this is the case carpet should be chalk lined and straight edge cut from the back using a sharp razor knife.
- When cutting from the back, care should be taken to just cut through the backings. Cutting too deeply can damage the face yarns and cause an unsightly seam.
- On non-patterned loop pile fabrics, row cut both breadths if possible. If not, row cut one breadth, and overlap and scribe cut the second breadth using a cushion back cutter.
- Remember that seam sealing is mandatory on all carpet.
- On patterned carpet, regardless of construction, cut along complementary patterns. This can be done using a “Cushion Back Cutter” and straight edge from the face or Gundlach’s # 295 “UniCutter” and “Hang Over Straight Edge” also used from the face.
- An alternate method for patterned carpet is to slit the carpet approximately every 3’ (1m) from the face along complementary pattern points and cut between slits from the back.

#### **PATTERN MATCH TECHNIQUE:**

- Trim both breadths to be seamed along complementary pattern points as directed above.
- For best results and maximum ease of installation, lengthwise pattern repeat, pattern bow, and pattern bias should be measured on all rolls to be installed. These measurements are made as part of the final inspection process in manufacturing and are available on roll tags and on the packing list that comes with each shipment. Site measurement of these properties allows the contractor to “fine tune” the sequence of installation. Measure these as follows:

#### **LENGTHWISE PATTERN REPEAT: (L.P.R.)**

- Divide published length pattern dimension into 144” for 12’ wide material or 162” for 13’6” wide material. This answer will generally be a whole number. If not, round up to the next higher number. For example: On 13’6” (4.1m) wide material having a 40.5 ”

length repeat, 40.5 goes into 162 four times.

- Measure along both selvages on each roll that number of pattern repeats obtained above (4 in this example). This measurement will typically be slightly larger or smaller than 144" or 162" (3.66m or 4.1M). In any dye lot, all measurements obtained in this way will vary no more than 2" (5cm).

## **2. PATTERN BOW: (WIDTH AND LENGTH)**

- For width bow, pick two identical pattern points on the same widthwise pattern line - one at the left edge and one at the right.
- Pull a chalk line or tightly stretched string between these points across the width (12' or 13'6"-3.66m or 4.1m). Measure the distance between the chalk line or string and the same pattern point at the point of greatest separation. This will be more than 1"(2.5cm) across 12' or 13'6" (3.66m or 4.1m).
- For length bow (also called "trueness of edge") use the same procedure connecting common pattern points 40 feet (12.6m) apart along the edge of the carpet. The pattern will be no more than ½" (12.8mm) from the string or chalk line.

## **3. PATTERN BIAS:**

- Starting at the same pattern points isolated in the width bow measurement (call these "A" and "B"), measure lengthwise along both selvage edges exactly 9' and mark these points with a small piece of tape. Call these points "C" and "D".
- Measure from point A diagonally to Point C and from Point B diagonally across to Point D. The difference between these measurements will not exceed 2-3/8" (6.0cm). More detailed information sheets on each of these criteria are available if needed.

## **4. GENERAL PATTERN PROCEDURES – STRETCH-IN INSTALLATIONS:**

- Group rolls and cuts working from the longest pattern repeat gradually down to the shortest.
- Shift trimmed breadths to achieve a match near the mid point of the seam. Insert hot melt tape under seam.
- Melt together that portion of the seam that is visually acceptable.
- Using a power stretcher or knee kicker, stretch along the "short" side (smaller pattern repeat) in 3 to 5 foot (1 to 1.6m) sections.
- As each small section of the seam is matched, insert seaming iron and prepare that section. Leave stretcher locked in position until each section cools.
- Do not complete any section of seam that does not match.
- Once all seams are matched and complete, the entire installed area is stretched as described in the above diagram.
- Width Pattern Bow up to ½" (1/2cm) and all pattern bias is dealt with during the power stretching process.
- Width Pattern Bow between ½" and 1" (1.2 cm / 2.5 cm) must be dealt with as the seams are assembled, working both sides of the seam simultaneously with knee kicker,

power stretcher, OR “crab” stretcher as required. Patterned corridor carpets (runners and caps) are subject to the same variations and are cut, pattern matched and installed using the techniques above. Maximum pattern width variation is ½” in 6’ (1.3 cm in 1.8 m). For best results keep right side runners with right side caps and left side runners with left side caps.

- These same procedures also apply on all end or “cross” seams. These seams are usually assembled from one side to the other across the width of the material.

#### **DIRECT GLUE-DOWN INSTALLATION:**

**RECOMMENDED ADHESIVES:** Milliken Broadloom Carpet Adhesive - 5 gallon (18.9liter) pails and 4 gallon (15.2Liter) pails are the recommended adhesives for all Joy Carpets broadloom products. This applies to all products having the ActionBac® secondary and to all attached cushion products. This adhesive product carries the CRI “Green Label” and is specifically designed to provide optimum performance with all Joy Carpets broadloom products regardless of the installation method chosen.

#### **COVERAGE:**

- Direct glue- ActionBac® and attached cushion - 10 to 15 sq. yds. per gallon using a 1/8” x 1/8” x 1/16” (3.2 mm x 3.2 mm x 1.6mm) “V” notched trowel
- Double Stick – Between Cushion and Carpet -6 to 8 sq. yds. per gallon using a 1/8” x 3/16” x 1/8” (3.2mm x 4.8mm x 3.2mm) “U” notched trowel or as recommended by the manufacturer of the double stick system being used.

#### **FLOOR PREPARATION:**

- All dust, foreign matter, non-compatible adhesive residues, grease, paint, wax, oil, dirt, etc. should be removed.
- Cracks, holes and depressions should be filled with a Portland cement based patching material. Protrusions should be removed.
- Floor surface should be smooth and non-undulating to within 1/8” (3.2 mm) in 10 feet (3.0 meter) in conformance with ACI standards.
- Standard Alkalinity and moisture tests should be performed. Concrete slab pH should not exceed 9.0. Excessive moisture will interfere with the curing/performance of the adhesive. Water vapor transmission should be exceed 3#/1000 sq. feet (1.4 Kg/93M<sup>2</sup>) /24 hour period as determined by the anhydrous calcium chloride test performed in accordance with ASTM F-1869-98. Joy Carpets subscribes to the industry position that this testing should be performed by an independent agency trained and certified to perform this testing.
- “Sealing” of concrete floors is at the discretion of the flooring contractor. In general, properly cured and dried (90 days minimum) steel trowel finished concrete requires no additional treatment. Excessively porous or dusty concrete slabs are the only exceptions. Please call Technical Services if you have questions. KURE- N-SEAL WB from Sonneborn (800-243-6739) is a recommended product should this type of treatment be

deemed necessary. This type of “sealing” is not a curative for excessive water vapor emission. If out of tolerance emission levels are encountered, call Technical Services for assistance.

## **INSTALLATION PROCEDURES – ADHESIVE INSTALLATION:**

- Trowel notch size, shape and adhesive coverage rate **MUST** be maintained as noted above. Insufficient adhesive is the #1 cause of failure in all adhesive installations.
- Proper open time must be allowed – temperature and relative humidity influence adhesive open time.
- If patterned carpet is being installed, installation sequence **MUST** be determined based on pattern repeat size as described above. There is no requirement for roll number sequence to be followed. L.P.R. Bow and Bias amounts are printed on the packing list and roll tag for added convenience.
- On non-patterned loop pile carpets, row-cut one of the breadths to be seamed, overlap this edge over the second breadth, and scribe cut to the row-cut edge. This method does not apply on patterned carpets. These must be cut along complementary pattern characteristics to insure a proper match. The use of hot melt seaming tape to achieve and secure pattern match is strongly recommended on all “double stick” installations and is very helpful on direct cement installation where repeat variation is significant. Orcon K-80 seam tape is the recommended product for both direct and “double stick” applications.
- Obtain a net seam – do not compress – use knee kicker or “crab” stretcher to position.
- Bead all edges with seam sealer on all carpets regardless of construction. (See previous section on seaming procedures and recommended products)
- Avoid air entrapment – lay carpet into adhesive working in both directions from center. Depending on the amount and type of pattern variation present, it is sometimes necessary to vary the way the carpet is placed back into the adhesive. For severe bow or bias it is more efficient to roll the carpet into the adhesive end to end in short sections working and straightening each section before proceeding. Where significant pattern repeat variation is present it is generally easiest to assemble the seams “dry” using the K-80 seaming tape noted earlier and then roll the carpet “sideways” to expose the floor under the seam. The backing paper on the K-80 is then removed and adhesive spread. The carpet is rolled back into the adhesive once the proper open time is observed.
- Roll with 75 lb. (34Kg) roller in both length and width directions or as directed by the cushion manufacturer in “double stick” applications.
- Restrict heavy traffic and furniture movement for 24 hours.

Joy Carpets cannot be responsible for pattern match in direct glue-down Installations. This includes all “double-stick” methods. If a consumer desires an adhesive installation, carpet must be inspected for visible manufacturing defects prior to installing. Once installed, Joy Carpets will decline all complaints except for latent defects. Sequencing of rolls by pattern repeat is mandatory when installing patterned carpet in any direct glue or “double stick” application.

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The above instructions represent the best available data and are deemed to be correct and complete. However, Joy Carpets assumes no liability for installation related problems. Except where exceeded or modified by this instruction, Joy Carpets recognizes CRI document 104 as a minimum standard for installation.