PROPINK® High Performance Conditioned Attic System

Installation Guidelines

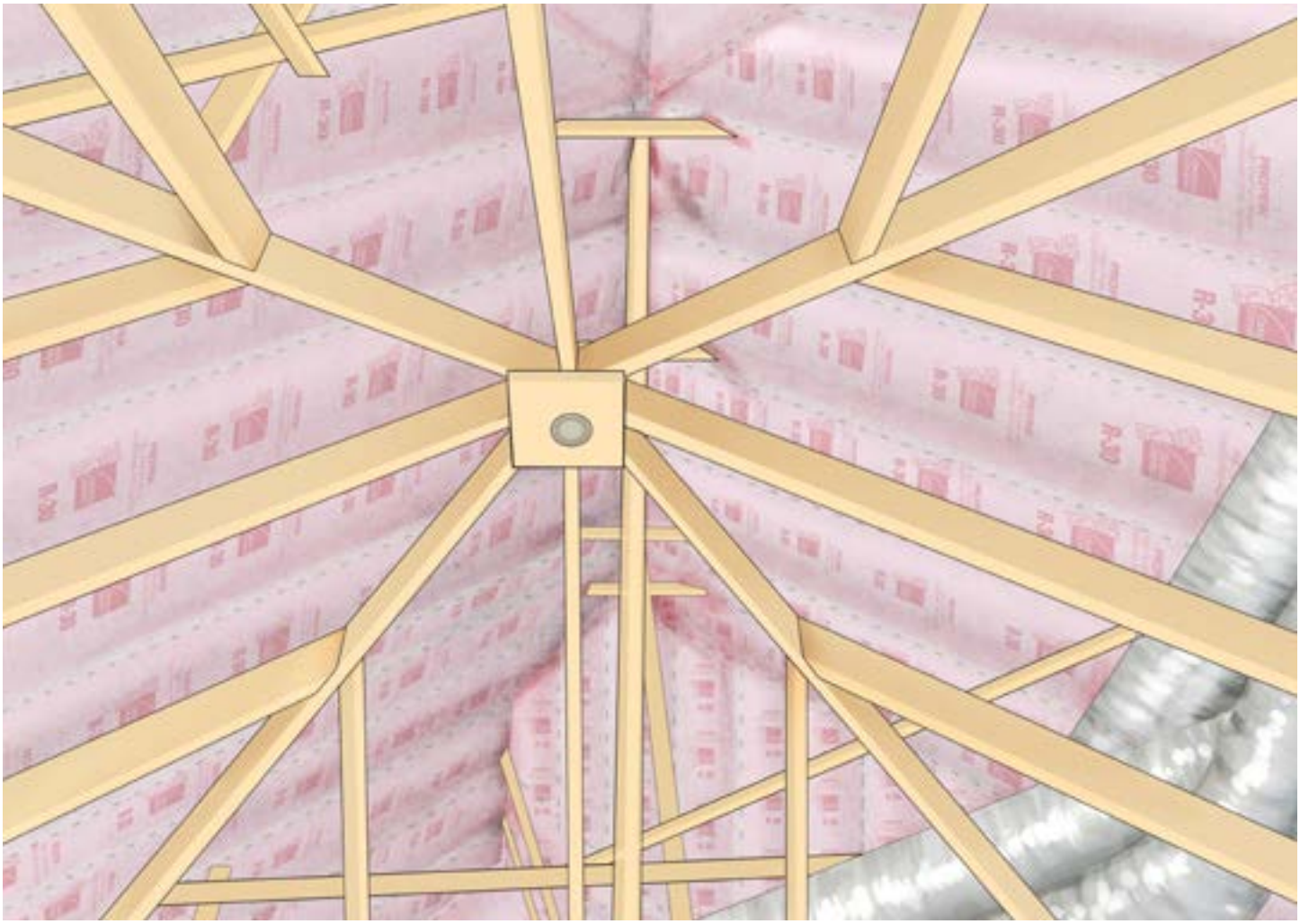
PROPINK® High Performance Conditioned Attic System

Our durable, high performance solution is designed to maximize the energy efficiency of the home by air sealing and insulating the attic. By adding thermal, air and moisture control at the roofline, the High Performance Conditioned Attic System delivers true R-Value to meet local codes.

- Provides uniform R-value with zero thermal bridges
- Constructed with Owens Corning® products proven to perform – ProPink ComfortSeal™ Gun Foam, ProPink™ Boxed Netting and ProPink® Loosefill Insulation
- Backed by Building Science, Owens Corning provides one of the best climatically-tuned solutions for the homes you build

NOTE:

- The High Performance Conditioned Attic system is approved for use in IRC/IECC Climate Zones 2B and 3B using the requirements noted on the Guidelines Table in the HPCA Product Data Sheet. Installations in areas outside of Climate Zones 2B and 3B not noted on the table must be reviewed by a registered design professional.
- The UL Evaluation Services Report ER7108-01 is available for the Owens Corning® ProPink® High Performance Conditioned Attic System.
- A vapor diffusion vent allows water vapor that may accumulate near the ridge of a sealed attic to diffuse to the exterior through its vapor-permeable membrane while still being a barrier to air and water. Please refer to Building Science Corp. literature on vapor diffusion vents for additional information.



High Performance Conditioned Attic System Construction Sequence

Stage 1: Air Sealing

Stage 2: Boxed Netting

Stage 3: Insulation

NOTE:

- **The air sealing/netting crew should be first into the attic** – immediately after the roof sheathing inspection and being "dried in" by having the roofing underlayment in place, but before HVAC, plumbing, and electric. This provides an unobstructed attic for the air sealing and netting installation.
- **The insulation crew should be last into the attic** – after HVAC, plumbing, electric, but before drywall. The crew comes prepared to air seal and repair netting issues caused by any penetrations.

Personal Protective Equipment Requirements

The use of personal protective equipment in a construction area is very important to your safety

Fall Protection

WORKERS MUST COMPLY WITH APPLICABLE OSHA RULES AND REGULATIONS WHEN INSTALLING ANY PORTION OF THE HIGH PERFORMANCE CONDITIONED ATTIC SYSTEM. THE PREFERRED CONDITION IS TO INSTALL THE PRODUCT WHILE STANDING ON PERMANENT OR TEMPORARY ATTIC DECKING THAT ELIMINATES THE FALL HAZARD. IF DECKING IS NOT FEASIBLE OR WOULD CREATE A GREATER HAZARD, ALTERNATE OPTIONS COULD INCLUDE:

- SCAFFOLDS, STATIONARY OR MOBILE
- AERIAL LIFTS
- LADDERS
- PERSONAL FALL ARREST SYSTEM

Other Precautions

CUTS — SURVEY THE WORK AREA FOR EXPOSED NAILS AND TRUSS CONNECTOR PLATES THAT COULD CAUSE A CUT.

HOT CONDITIONS — THE ATTIC ENVIRONMENT IS TYPICALLY HOTTER THAN THE OUTSIDE CONDITIONS AND COULD RESULT IN HEAT EXHAUSTION. DRINK PLENTY OF FLUIDS.

HIGH PERFORMANCE
CONDITIONED ATTIC SYSTEM

Air Sealing Installation

Job Checklist

- ProPink ComfortSeal™ Gun Foam
- Lightweight structural sheathing
- Hammer stapler and staples
- Utility knife
- Smooth edged scissors

SAFETY

Use of Owens Corning® ProPink ComfortSeal™ Gun Foam

- See general safety recommendations
- This product is extremely flammable during dispensing and curing. Read precautions carefully
- Use only in well ventilated areas. Wet chemical in the foam is isocyanate, which is hazardous. Provide sufficient cross ventilation to remove any buildup of vapors
- Wear protective glasses or goggles, nitrile gloves, and clothing that protects against exposure to the skin
- Read all instructions and safety information (SDS) prior to use of any product
- Keep away from heat, sparks, and sources of ignition
- Contents are under pressure. Do not puncture or incinerate. Do not place in hot water or near radiators, stoves, or other sources, or store above 120°F

Fasten Lightweight Structural Sheathing as Blocking Material

Common areas in need of blocking include:

- Walls that adjoin the conditioned attic with an unconditioned space, such as above a garage
- Walls at the gable-end of the attic
- Excessive gaps around roof deck penetrations
- Eaves

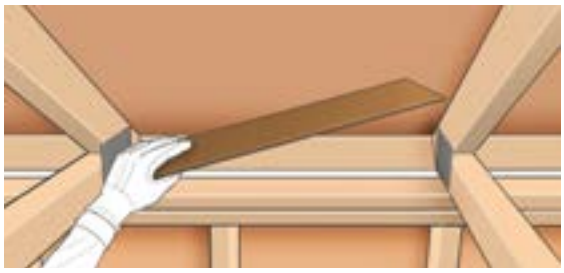
1. SET IN PLACE

Cut the lightweight structural sheathing to size and set in place such that it is resting flat on the top plate and making firm contact with the frieze board.

2. STAPLE

Fasten the lightweight structural sheathing to the top plate with a minimum of five (5) staples (5/16" or longer)

*Please note that closing the gap between the top plate and the frieze board facilitates just air sealing the joint instead of adding lightweight structural sheathing and air sealing that entire panel.



Air Sealing Installation

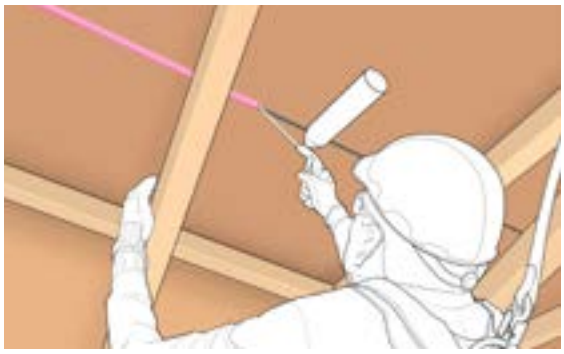
Areas to Seal

1. ROOF DECK TRANSITIONS

Ridge, hips and valleys – Sealant is to be applied on both sides of the framing member that accompanies the transition

2. EXPOSED SHEATHING JOINTS

Sealant is to be applied to all exposed roof deck and gable end sheathing joints



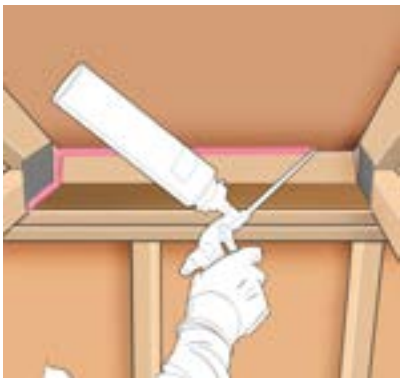
3. PENETRATIONS

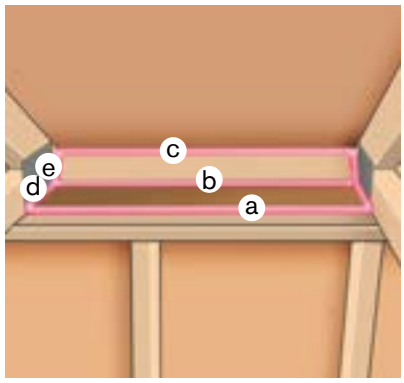
All roof deck penetrations are to be flashed to the interior side of the roof deck such that the gap is 3/8" or less. The gap to the penetration is then to be sealed, as well as the perimeter of the flashing material

4. EAVES

All joints at the eave are to be sealed. The quantity of joints could vary depending on the eave detail. For cases where the lightweight structural sheathing is used as an eave block, the following locations are to be sealed:

a. Bottom plate to eave block
b. Eave block to frieze board
c. Frieze board to roof deck
d. Edges of eave block to truss chords
e. Edges of frieze board to truss chords





Boxed Netting Installation

Job Checklist

- Owens Corning™ ProPink™ Boxed Netting
- Hammer stapler and galvanized staples (5/16", 20 ga.)
- Plier stapler and galvanized staples – .050 (wire width) x .019 (wire thickness) x 1/4" (leg length)
- Utility knife
- Ladder
- Smooth edged scissors

SAFETY

Use of the Netting

- See general safety recommendations
- Two or more pieces of netting laying on top of one another can be slippery. Use caution when stepping on netting

Material Storage:

Do not store the netting outdoors or in direct sunlight

Overview of the Boxed Netting System

1. HANG

Install individual pieces of netting, stapled to the face of the truss chords with the hammer stapler

2. CONNECT

Gather adjacent pieces of netting at connecting tabs and fasten with a plier stapler to form a taut bottom

3. BLOW

Fill the newly formed truss cavities with blown in fiberglass of appropriate density to achieve desired R-value

Netting of Standard Width (24") Cavities

HANG

Unroll, Secure and Cut

1. With the netting on the floor, **unroll** and thread netting from eave to eave
2. **Secure** netting to eave on far-side to top plate
3. **Secure** netting to ridge
4. Measure the length of netting required to produce a continuous bay from eave to eave, **cut**
5. **Secure** netting to eave on near-side to top plate

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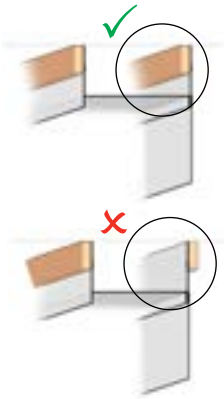
CONDITIONED ATTIC SYSTEM

Boxed Netting Installation

Fasten netting to top truss chord

1. Align netting with the roof deck
2. Fasten netting along the top truss chord using staples a minimum of 2" from the roof deck
   - Staples should be applied to the face (3½" side) of the trusses and a maximum of **6" apart**
   - Netting orientation with respect to truss face should be maintained

Ensure same orientation



CONNECT

1. Position the connecting tabs on adjacent pieces of netting
2. Staple the two connecting tabs together along the top of the seam, a maximum of **3" apart**
   - The bottom side of the netting should be tight, with no slack
3. At the eave, bunch the netting and hammer staple to the top plate
   - This step of fastening the netting at the eave is often best done immediately prior to the blowing step. This allows the other leads to have easy access to the top plate for wiring and piping penetrations

1

2

3

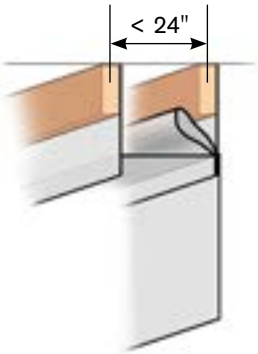
Netting of Narrow Width (< 24") Cavities

HANG

Fasten netting to top truss chord in the same manner as shown for standard width cavities

CONNECT

1. Bunch up the extra netting inside of the cavity. Create a custom connecting tab by creasing the netting such that the bottom of the netting is tight when the created tab is stapled to the adjacent factory-made tab
2. Staple the two connecting tabs together along the top of the seam, a maximum of **3" apart**
3. Finish netting install - The bottom side of the netting should be tight, with no slack



Boxed Netting Installation

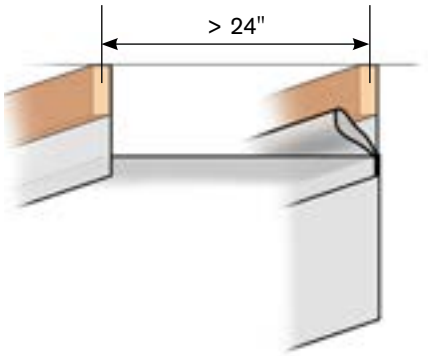
Netting of Wide Width (> 24") Cavities

HANG

1. When encountering wide width cavities (i.e greater than 24"), switch to the **Utility Roll (34" flap)**
2. Fasten utility netting to top truss chord in the same manner as shown for standard width cavities

CONNECT

1. While pulling one side of the netting tight, bunch up the netting attached to the opposing side of the truss bay to determine the quantity of excess material
2. Create a custom connecting tab, bunching up the excess in the cavity
3. Staple the two connecting tabs together along the top of the seam, a maximum of **3" apart**
4. Finish netting install - The bottom side of the netting should be tight, with no slack



Netting of Cavities at the Hip

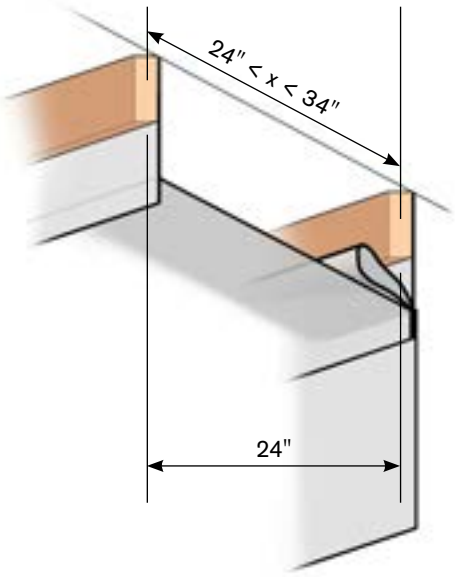
HANG

1. When encountering hips, due to the pitch of the roof, the distance between adjacent bays will increase even if the foot print of the trusses stay at the 24" spacing. See the table for the relationship between pitch and cavity width. Use the **Utility Roll** with an extra-wide flap (34") to meet this need. First, the installer needs to recognize that a different product is needed
2. Fasten utility netting to top truss chord in the same manner as shown for standard width cavities

Pitch (x:12)	Cavity Width (in)
4	25.3
5	26.0
6	26.8
7	27.8
8	28.8
9	30.0
10	31.2
11	32.6
12	33.9

CONNECT

1. Bunch up the extra netting inside of the cavity. Create a custom connecting tab by creasing the netting such that the bottom of the netting is tight when the created tab is stapled to the adjacent factory-made tab
2. Staple the two connecting tabs together along the top of the seam, a maximum of **3" apart**
3. Finish netting install - The bottom side of the netting should be tight, with no slack

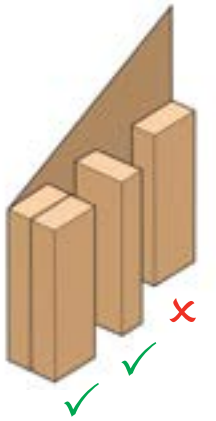


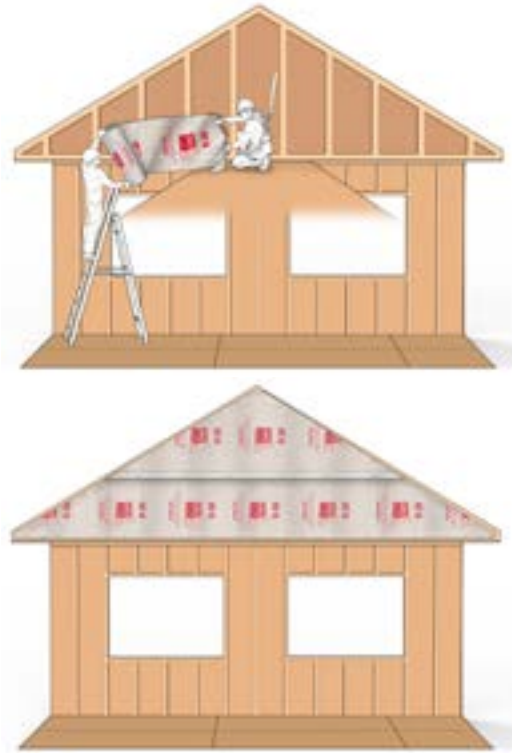
Boxed Netting Installation

Netting of Gable Ends and Other Vertical Surfaces

HANG

1. The gable end approach is similar to the netting and blowing of conventional walls. The netting engineered for this application comes in 4' and 8' widths. This is the same material that is used for the roof netting. **Do not use regular wall netting as it has not been tested to meet the requirements of this application**
2. Before starting, ensure that the cavity formed by exterior sheathing and the framing satisfies the R-value requirements (e.g., a minimum of 3" is required to achieve R13). This can be accomplished when the 2 x 4" framing is faced perpendicular to the house or if there is double 2 x 4 framing with the 2 x 4's facing the interior. If these conditions are not met, work with the builder to rectify before continuing work on the gable ends
3. Starting from one side of the eave, **unroll** the product along the face of the gable
4. Moving across the gable, fasten to the framing via staples every 3"



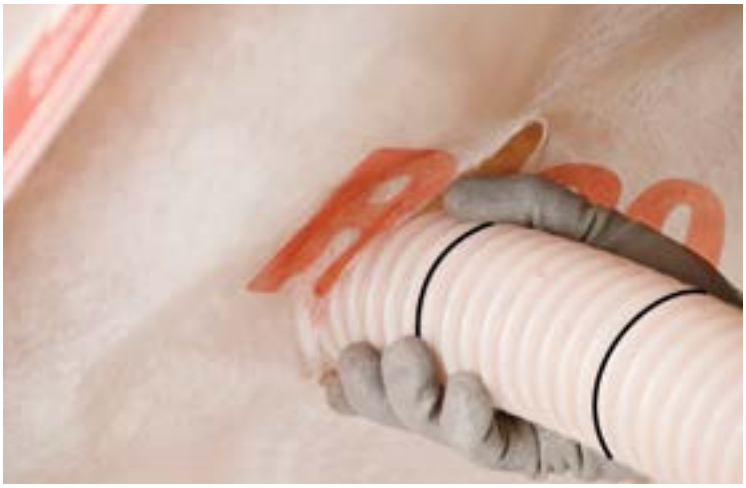


INTERFACE

1. At the area where the roof deck meets the gable end or another vertical surface, it is suggested that the regular netting be hung from the roof deck with the 24" flap facing away from the gable
2. **Staple** the anchor of the netting to the gable end where possible
3. Similar to narrow width bays, bunch up the extra netting from the roof deck material, and **position** next to the material from the gable end
4. **Connect** the netting hanging from the deck to the netting at the gable end. Apply staples a maximum of **3" apart**

HIGH PERFORMANCE
CONDITIONED ATTIC SYSTEM

Insulation Installation



Job Checklist

- Owens Corning® ProPink® Loosefill Insulation
- ProPink ComfortSeal™ Gun Foam (for any last minute air sealing)
- Owens Corning™ ProPink™ Boxed Netting of the correct R-value (for any last minute netting repair)
- Hammer and plier stapler with staples (for any last minute netting repair)
- Blowing machine with hose
- Ladder
- Utility knife
- Metronome with ear buds
- Flow rate bag
- Digital scale with strap
- Steel hose tip

SAFETY

Installation of the Insulation

These instructions are only a summary guide for installing insulation as part of the ProPink® High Performance Conditioned Attic System. Installation should not be attempted without the appropriate training. See general safety recommendations. Refer to the product package and product Safety Data Sheet for additional safety information. The process of blowing insulation into enclosed cavities is best accomplished with two people.

Fire Hazard

To help prevent fire or overheating of recessed light fixtures or similar electrical devices, do not insulate within 3" of such devices unless they are specifically approved to be covered by insulation. Do not place insulation in air spaces surrounding metal flues, chimneys, or fireplaces. Provide minimum clearances specified in NFPA-31, NFPA-54, or NFPA-211, or as required by local building codes.

BLOWING INSTRUCTIONS

Only use Owens Corning® ProPink® Loosefill Insulation for this application. Visit www.owenscorning.com/HPCAInstallVideo to watch the Blowing Instructions video.

Final Air Sealing & Netting Repair

Prior to blowing the insulation, inspect the entire roof deck for any remaining penetrations that need to be air sealed or damaged netting that needs to be repaired.

Hose Setup

The hose used inside the cavity shall be 3" in diameter and marked using a permanent marker. Mark rings every 4" (normally every 9th loop) along the length of hose that you will use in the cavity as shown. These rings will be used to pull the hose out of the netted cavity at a calculated rate to assure the correct amount of insulation is installed.

Attach 3" diameter steel hose tip at the end. Slide steel end into the hose several inches and seal with gray duct tape as shown. The weight of the tip helps slide the end of the hose all the way to the soffit. The angle cut helps slide the tip around obstacles such as vent stacks.

Insulation Installation

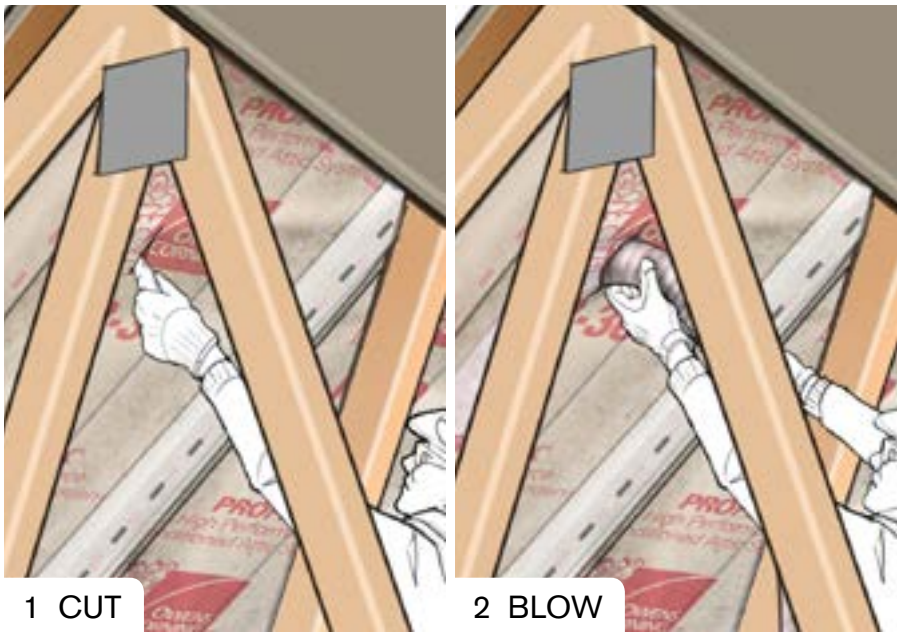
Blowing Machine Setup

1. Adjust settings on the blowing machine to maximum flow – this is normally gate wide open, highest gear, and air bypass / relief valve closed
2. It is important that the auger is always kept covered with insulation so the flow rate of the machine stays consistent. This helps ensure each cavity is installed with the correct amount of insulation
3. Determine how fast your machine is blowing insulation for this job. This needs to be measured for each job due to the variables between jobs, including hose length
   a) Stretch out length of hose to be used at the job, should be minimum of 150'
   b) Fill the hose with insulation:
      - Lay the bag on the floor, open the Velcro® side of the bag and insert the hose tip into the bag as shown. Close the Velcro® tight around the hose tip so there is no leakage
      - Start and run the blowing machine until *the hose only* is full of insulation and then shut off
      - Carefully pull the hose out and set aside. Open the Velcro® side of the bag and *empty* the small amount of insulation back into the blowing machine
   c Lay the empty bag on the floor, open the Velcro® side of the bag and insert the hose tip into the bag as shown. Close the Velcro® tight around the hose tip so there is no leakage
   d) Get a stopwatch or timer or phone app ready to use
   e) While holding the bag and hose, turn on the blowing machine for exactly 30 seconds per the stopwatch and then shut off. Make sure the machine auger stays covered with insulation
   f) Remove the hose and seal the opening so not to lose any insulation
   g) Hang the scale by wrapping the strap around a truss and through the handle of the scale as shown
   h) Turn on the scale. It should read 0.00
   i) Hang the bag on the scale and record the weight in pounds. Make sure the bag is not touching the floor or anything that would affect the reading
4. Determine the hose withdrawal speed. This assures the correct amount of insulation is installed
   a) Find the Metronome Setting Chart (page 13) that has the R-value to be install
   b) Find the column that is closest to the bag weight measured above
   c) Find the row that corresponds to the desired cavity width
   d) Look at the beats /minute number that intersect at the row and column
   e) Set the metronome to this number
   f) Pull the hose out at the rate of one mark on the hose per beat

Insulation Installation

Filling a Cavity

1. Near the roof ridge, cut a slit large enough to insert the blowing hose in the netting. Insert the hose behind the netting and slide the hose all the way down the netted cavity to the eave
2. Turn on the metronome making sure it is set to the correct beats/minute
3. Start the blowing machine making sure the auger stays covered with insulation to assure a constant flow rate
4. Once the insulation begins to flow out of the end of the hose, begin to pull the hose out one marked ring per metronome beat
5. When the end of the hose end reaches the opening turn off the blowing machine and remove hose
6. Repeat steps 1 through 4 for the other side of the roof to the opposite eave
7. Leave the blowing machine on and point the hose at the top of the cavity until the netting at the roof ridge has tightened and bulged slightly
8. Turn off blowing machine and remove hose



1 CUT

2 BLOW

Insulation Installation

METRONOME SETTING CHART

IMPORTANT: These charts apply only to Owens Corning supplied bags that have been completely clean out between uses.*

R-22 Blowing Hose Withdrawal Rate: Metronome Setting (beats/minute)

		Weight of bag in pounds												
		13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5
Width of Cavity (in)	12	120	125	130	135	140	145	150	155	160	165	170	175	180
	16	90	94	98	101	105	109	113	116	120	124	127	131	135
	24	60	63	65	68	70	73	75	77	80	82	85	87	90
	30	48	50	52	54	56	58	60	62	64	66	68	70	72
	36	40	42	43	45	47	48	50	52	53	55	57	58	60

R-30 Blowing Hose Withdrawal Rate: Metronome Setting (beats/minute)

		Weight of bag in pounds												
		13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5
Width of Cavity (in)	12	93	97	101	104	108	112	116	120	123	127	131	135	139
	16	70	73	75	78	81	84	87	90	93	95	98	101	104
	24	47	48	50	52	54	56	58	60	62	64	66	67	69
	30	37	39	40	42	43	45	46	48	49	51	52	54	55
	36	31	32	34	35	36	37	39	40	41	42	44	45	46

R-38 Blowing Hose Withdrawal Rate: Metronome Setting (beats/minute)

		Weight of bag in pounds												
		13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5
Width of Cavity (in)	12	70	73	76	79	81	84	87	90	93	96	99	101	104
	16	53	55	57	59	61	63	65	68	70	72	74	76	78
	24	35	36	38	39	41	42	44	45	46	48	49	51	52
	30	28	29	30	31	33	34	35	36	37	38	39	41	42
	36	23	24	25	26	27	28	29	30	31	32	33	34	35

R-49 Blowing Hose Withdrawal Rate: Metronome Setting (beats/minute)

		Weight of bag in pounds												
		13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5
Width of Cavity (in)	12	53	55	57	59	62	64	66	68	70	72	74	77	79
	16	40	41	43	45	46	48	49	51	53	54	56	57	59
	24	26	28	29	30	31	32	33	34	35	36	37	38	39
	30	21	22	23	24	25	25	26	27	28	29	30	31	32
	36	18	18	19	20	21	21	22	23	23	24	25	26	26

*The tare weight of the bag has been taken into account in the chart calculations (1.25 pounds).

Insulation Installation

COVERAGE CHART

Use the chart below to determine the required number of bags. Stated R-value is achieved by installing the minimum required number of bags per 1,000 sq. ft. at a thickness not less than the stated minimum thickness. Failure by the installer to provide both the required number of bags and at least the minimum thickness will result in lower insulation R-value.

R-value	Cavity Depth [in]	Maximum Coverage [sq ft/bag]	Minimum Bags per 1000 sq ft	Minimum Weight [lb/sq ft]
22	5.5	54.1	18.5	0.610
30	7.5	41.7	24.0	0.792
38	9.5	31.4	31.8	1.050
49	12.25	23.7	42.1	1.390

Density Assurance:

a) Identify a filled cavity for measurement
b) Mark two lines on the netting across the width of the cavity, where the lines are separated by 24"
c) With a sharp utility knife, cut the netting along the lines and allow the insulation to empty into a bag or box
d) Weigh the material on a scale that displays weight in tenths of a pound
e) Divide the weight by 4. This is the area weight in lbs/sq ft
f) Compare this value to the Minimum Weight [lbs/sq ft.] listed in the coverage chart
g) Patch the opening with new netting and re-blow

Notes

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Pub No. 10019449-D. Printed in U.S.A. September 2019.