# HOW TO INSTALL YOUR COLUMBIA SKYLIGHTS

## CURB MOUNT

**COLUMBIA GLASS CURB MOUNT SKYLIGHTS REQUIRE A MINIMUM 2:12 ROOF PITCH.**

Columbia SKYLIGHTS

The natural light specialists

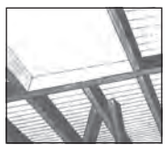
## Plan your installation

Decide on the roof location of your Columbia Skylight. If it is over an attic area you will have to plan on constructing an insulated light shaft from the roof to the ceiling. The light shaft will not only bring in natural light to a room well below roof level it could help you solve some difficult lighting problems as well. Check local building codes, then take care during construction not to weaken your roof's load-bearing support.

## 1. Mark the spot

Now you are ready to begin installation. Remove all insulation around the area where you are installing your skylight. Re-route any electrical wiring or plumbing that would block the roof and ceiling opening. Measure roof opening location and mark, taking care with your plumb line, to insure roof opening is directly above where ceiling opening will be for light shaft. Drive nails from inside through the roof at the four inside corners to locate the correct position from the outside.

## 2. Cut away the roof



Go to the roof and mark lines that are two inches beyond the lines the corner nails make. Remove the shingles back to these lines allowing room to mount the roof curb. Now draw connecting lines between the nails. Double check to make sure your dimensions are correct. Remove the roof sheathing or strapping with a hand saw or circular power saw. If a section of rafter is to be cut make sure it is well supported.

## 3. Framing

Nail in upper and lower headers (2x4 or 2x6 depending on size of adjacent rafters refer to framing and light shaft construction sketch) ensuring that the correct rough opening dimension is maintained. Then nail through headers into the rafters that were cut in order to support them permanently.

## 4. The roof curbs

Build your roof curb ahead of time using 2x4 or 2x6 lumber. Once again make sure the curb has the same inside dimensions as the roof opening. Before securing curb, install head flashing *(see Columbia flashing installation guide)* and tuck up under the shingles. Apply sealant along bottom of curb and sit curb in place. Ensure curb corners are 90° square and the top of curb is flush and level for a good seal with your Columbia Skylight. Now nail curb into place. Wrap curb in self adhering membrane/underlayment starting with sill, then 2 sides, followed by the head (consider use of Columbia Roofing Underlayment). It is recommended to apply underlayment from top of curb to 90° curb base and onto roof deck. Tack head flashing against the curb and renail any shingles that were loosened or removed.

## 5. Sill and step flashing

Install the sill flashing as shown in sketch and rest it on top of the shingles. Apply a bead of sealant to the under side of the flashing where it rests on the down slope shingles then nail it to the roof curb. Install step flashings, beginning with the bottom piece of side flashing. Tuck it under the first row of shingles making sure it goes over top of the sill flashing. Continue to overlap pieces of flashing up the side of the curb taking care to tuck each piece well under the adjacent shingle. Use liberal amounts of sealant on all overlapping sections of flashing. When installing the top step flashing make sure it is tucked well under the head flashing.

## 6. Counter-flashing and sealing

Although not essential, it is advisable to counter flash over your step flashing. Counter flashings are included with all Columbia Curb Mounted flashing kits. Apply sealant liberally to all overlapped sections of flashings. Seal well the corner joints where the head and sill flashings join with the side flashings. **Note:** *Other types of roofing materials and methods may be used if more appropriate for your climate or roof construction. For more information on roofing materials and installation methods in your area call a local roofing contactor or building materials supplier.*

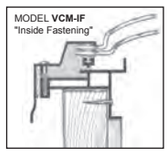
## 7. The ceiling opening & light shaft

Determine the exact location of the ceiling opening for a vertical light shaft by dropping a plumb line from the lowest inside corners of the roof opening to the ceiling and tack small nails through the ceiling at these four points (illus.1). From the room below draw connecting lines between these nails and cut out the ceiling material.

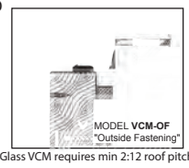
Support the ceiling joists then remove sections for the light shaft. Nail in headers to frame ceiling joist opening and then nail through headers to crippled joists.

Construct the light shaft frame by nailing 2" x 4" studs vertically from roof opening to upper corners of ceiling opening. Complete framework, for attaching light shaft liner.

## 8. Installing your Columbia Skylight




Now you are ready to install your Columbia Skylight. Apply ½" thick continuous bead of non hardening caulking or foam tape on the top of the roof curb. Set the skylight firmly onto the curb. If it doesn't fit easily, recheck curb dimensions and squareness then make any adjustments. From the interior or exterior, depending on model type, screw or nail the skylight to the wood curb through the pre-drilled nailing flange. Remove all protective masking and tape.




Glass VCM requires min 2:12 roof pitch

## 9. Finishing the light shaft

Have your finishing material butt up to the white vinyl nailing flange. If you are drywalling the light shaft use a vinyl moulding over the exposed edge of the board to protect it from moisture.White or light colours will give more light to theroom below. If you are using wood be sure to seal it with oil to protect it from any build up of condensation which may stain the wood.

Ensure your light tunnel is insulated with minimum R20 insulation, with no gaps. Then install a ⅛"(3mm) polyethylene vapour barrier with overlap on all joints. Secure with staples. Finally, a wooden trim can be used to finish the ceiling where it meets the light well tunnel.

## SELECT THE ROOF OPENING

Now that you have your location determined and your tools ready, select from this chart of sample sizes the roof opening that you will need for your Columbia Skylight.

| **COLUMBIA SKYLIGHT** | **ROUGH OPENING DIMENSIONS** | |
|---|---|---|
| **Model Number** | inches | mm |
| 2828 | 22½" x 22½" | 572 x 572 |
| 2836 | 22½" x 30½" | 572 x 775 |
| 2852 | 22½" x 46½" | 572 x 1181 |
| 3636 | 30½" x 30½" | 775 x 775 |
| 3652 | 30½" x 46½" | 775 x 1181 |
| 5252 | 46½" x 46½" | 1181 x 1181 |

*Cut your roof opening exactly to these dimensions. Sizes from 2' x 2' to 8' x 8' available.*

## TAR AND GRAVEL ROOF

Basically, apply the same procedure to installing your Columbia Skylight to a tar and gravel roof as you would to an asphalt, shingle or shake roof. Before cutting through the roof make sure the area is well cleaned to ensure a good seal when the opening is repaired and the installation completed. Sweep or hose back all loose gravel then make sure the roof is perfectly dry. Cut through the tar and roof material along the lines between the corner nails.

After the roof curb has been built and squared, nail to the outside a 2" x 2" cant strip cut diagonally to a 45° angle.

Nail the curb and cant strip to the roof over top of old tar, lining up the rough opening of the curb with the rough opening in the roof deck.

Add two layers of cold tar and paper around the new curb overlapping the existing roofing by at least 12". Ideally, with the help of a qualified roofer, apply hot tar over patched area. Finally, install flashing over curb and cant strip, then install your Columbia Skylight as explained previously.

*Further help* can *be supplied by* contacting *your Columbia Skylight dealer*.