



AMERICAN TOP-LIGHTS

- rooflights
- metal skylights
- stage ventilators

LIGHT UP
The AMERICAN Way!

AMERICAN 3 WAY-LUXFER PRISM CO.
431 South Dearborn Street
Chicago 5, Illinois

AMERICAN 3 WAY-LUXFER PRISM CO., INC.
51-49 35th Street
Long Island City, New York

TOP-LIGHTS | glass block

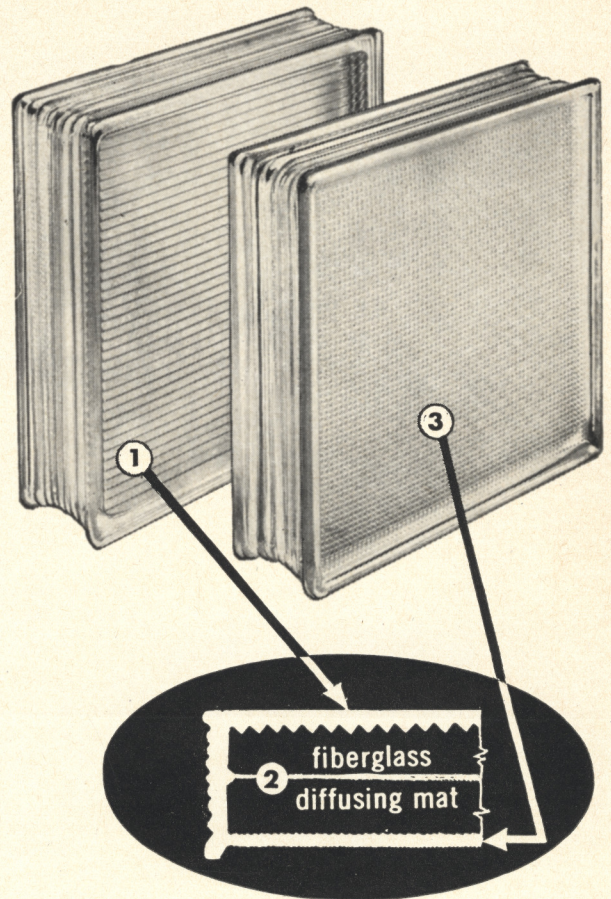
American Top-Light panels are completely assembled in the factory. Each panel is made of extruded aluminum sections designed to carry customary required roof loads. Being comparatively light weight, they can be used on average roof structures.

The first function of Top-Lights—selection and control of light as it enters—is peculiar only to these unique glass blocks. The grooves on the under side of the block top plate (1) serve as a sort of traffic director for the various types of daylight that fall on it. Uniform, reflected north light is given unrestricted passage. The winter sunlight, from low in the southern sky, also has free passage. Hot, overbright summer sunlight is mostly rejected.

Secondly, Top-Lights direct the light downward, regardless of the direction of the sunlight. This eliminates the traveling "bright spots" that might appear under ordinary diffusers as the sun travels from east to west.

The fibrous glass (2) sealed in the center of the block, together with the waffle-patterned bottom side (3), diffuse and spread the light into one uniform downward flood of soft roomlight.

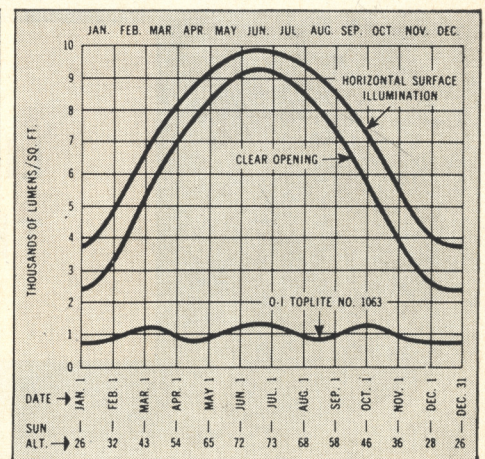
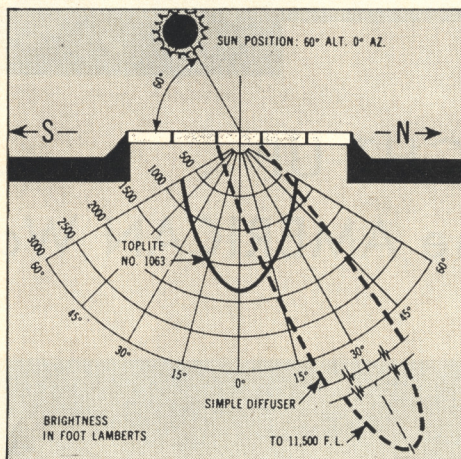
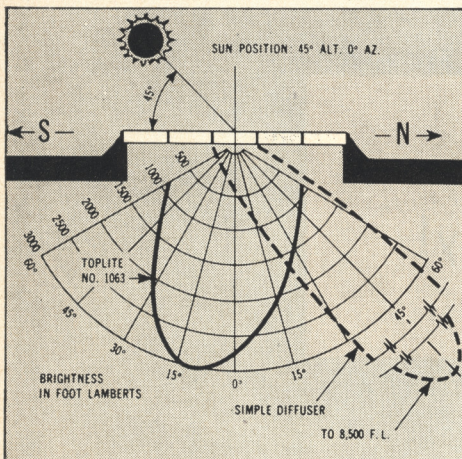
The hollow spaces on either side of the fibrous glass mat in the center of the block form heat insulating dead air spaces.



Condensation

Due to the design and construction of the supporting grid in which insulating materials are fully employed, condensation will not start forming on underside of Top-Lights until the outside air has reached a temperature much lower than that necessary to produce condensation on metal framed skylights and domes.

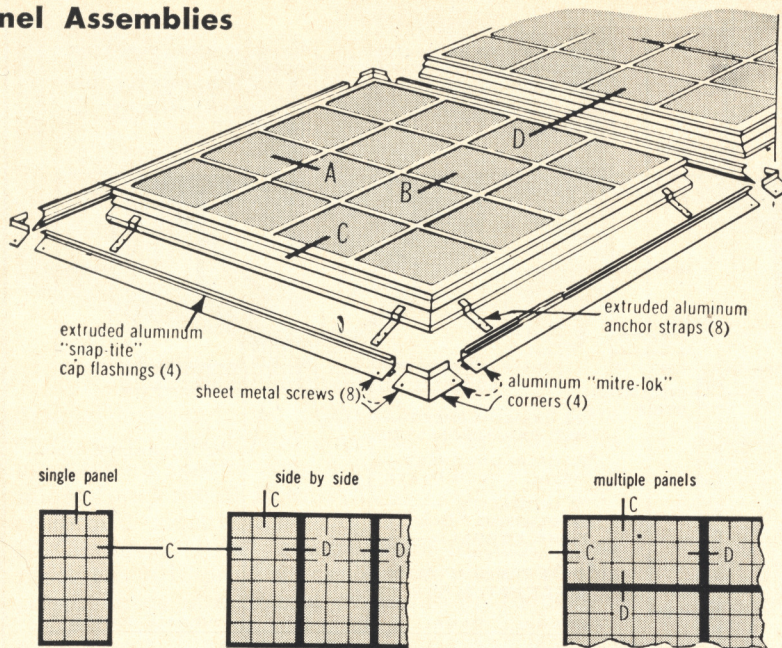
Comparative Performance of Top-Light



The first two comparative performance charts demonstrate the difference between Top-Light and simple diffusers in the brightness distribution and directional control of light. All daylight is well diffused by Top-Lights without any intense beam of light in any direc-

tion at any time of day. The chart, above right, demonstrates the uniformity achieved by Top-Lights the year around. These year round tests were taken at high noon.

Panel Assemblies



Top-Light glass blocks are assembled into special aluminum grids to make-up standard panel units of various sizes. The blocks are surrounded by an insulation fill properly treated, covered and sealed with Tee-Ess compound for protection and weatherproofing.

The diagram above illustrates the accessories, their relative position and quantity of each part. Each panel is labeled with step-by-step installation instructions for the contractor including (1) direction of north, (2) direction of structural members and (3) code numbers.

For lower cost and quicker delivery, standard sizes should be ordered whenever possible. Special sizes can be built up to 22 square feet or up to 6'2" in any one direction.

Large Top-Light areas can be achieved by placing standard panels side-by-side and/or end-to-end. Necessary expansion strip and insulating cover plate will be furnished complete with construction details when multiple paneling is specified.

STANDARD SIZES

CODE NO.	SKETCH	DIMENSIONS	THIS ARROW TO THE NORTH	DIRECTION OF STRUCTURAL MEMBERS	UNCURATED WEIGHT, LBS.	LBS. WGT. GRADED WITH ACCESSORIES
33 NS		3'-2" x 3'-2"	↑	↑	175	208
44 NS		4'-2" x 4'-2"	↑	↑	298	349
36 NS		3'-2" x 6'-2"	↑	↑	334	387
45 NS		4'-2" x 5'-2"	↑	↑	378	432
54 NS		5'-2" x 4'-2"	↑	↑	378	432
33 EW		3'-2" x 3'-2"	↑	↔	175	208
44 EW		4'-2" x 4'-2"	↑	↔	298	349
63 EW		6'-2" x 3'-2"	↑	↔	334	387
45 EW		4'-2" x 5'-2"	↑	↔	378	432
54 EW		5'-2" x 4'-2"	↑	↔	378	432

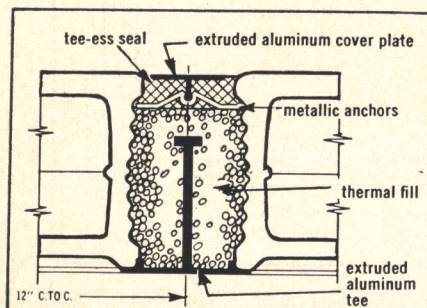
Specifications

Top-Light panels shown on the plans shall be design TL54-1 manufactured by American 3 Way-Luxfer Prism Co., using semi-vacuum, selective light glass block, 10 $\frac{5}{8}$ " square, approximately 3" thick, set on 12" centers in an extruded aluminum grid construction with insulation fill and Tee-Ess weatherproof seal. Top-Light panels shall reach job site completely factory fabricated and ready to set in place.

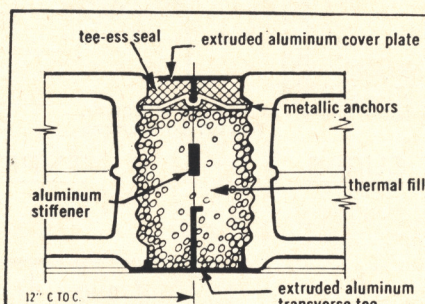
Contractor shall build proper supporting curbs to receive the Top-Lights and shall provide for all materials, labor and services necessary to hoist them to roof, set them in place, and flash.

Curbs should be built with at least $\frac{1}{4}$ " pitch in 12" to secure ready drainage and Top-Lights must be set in strict accordance with the directional marking and installation instruction labels attached to each Top-Light panel by the manufacturer.

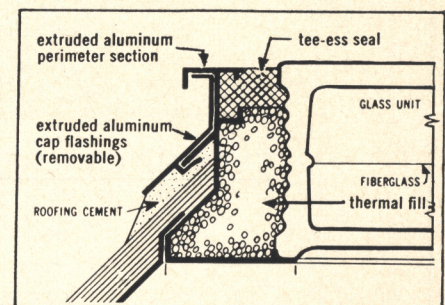
Details



A cross section of joint between blocks viewed from north-south ends

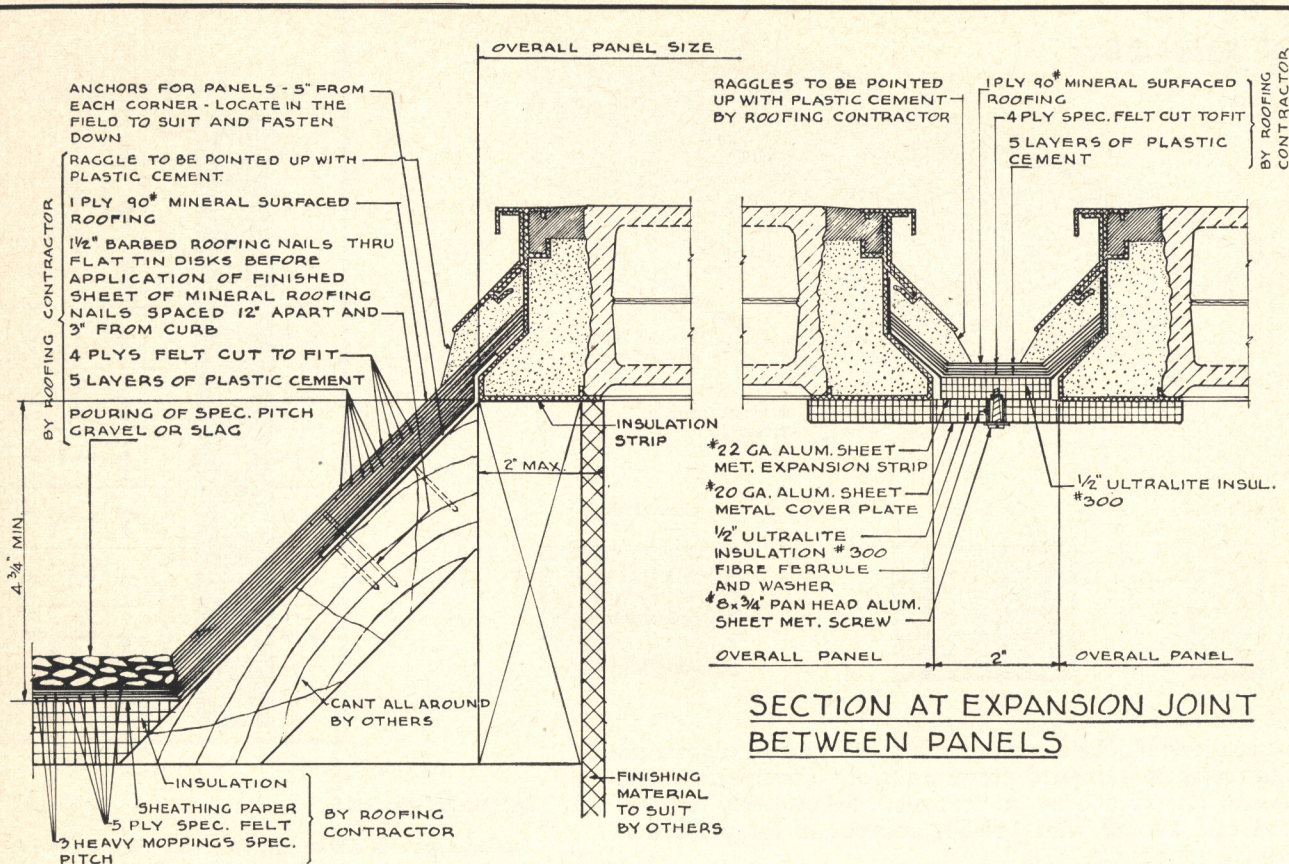


B cross section of joint between blocks viewed from east-west ends

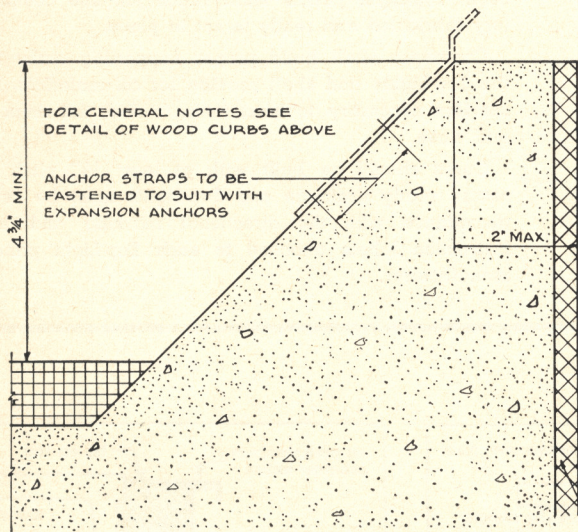


C cross section of grid perimeter showing the flashing

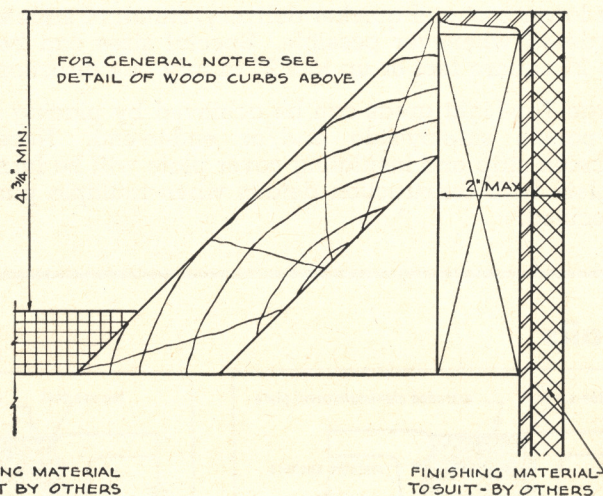
TOP LIGHTS | extruded aluminum grid



SECTION AT CURBS
TYPICAL WOOD CURBS



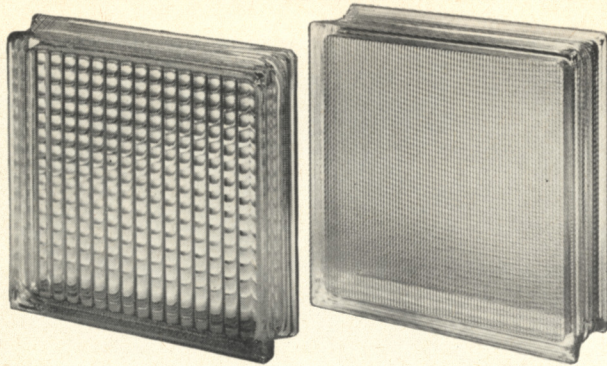
TYPICAL CONCRETE CURBS



TYPICAL STEEL CURBS

3WAY TOP LIGHT CONST.	AMERICAN 3WAY-LUXFER PRISM CO.	PLATE TL54-1 SHEET B 6-1-54
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CONCRETE GRID ROOFLIGHTS

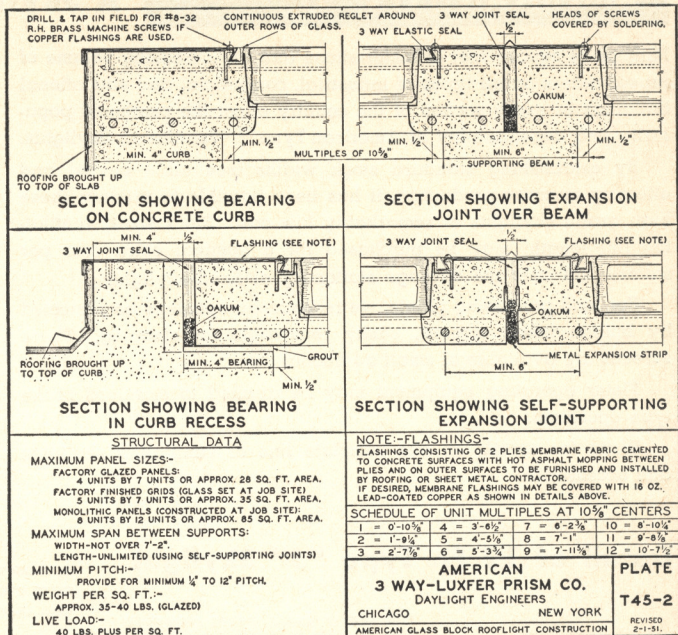


No. 91M

No. 1016

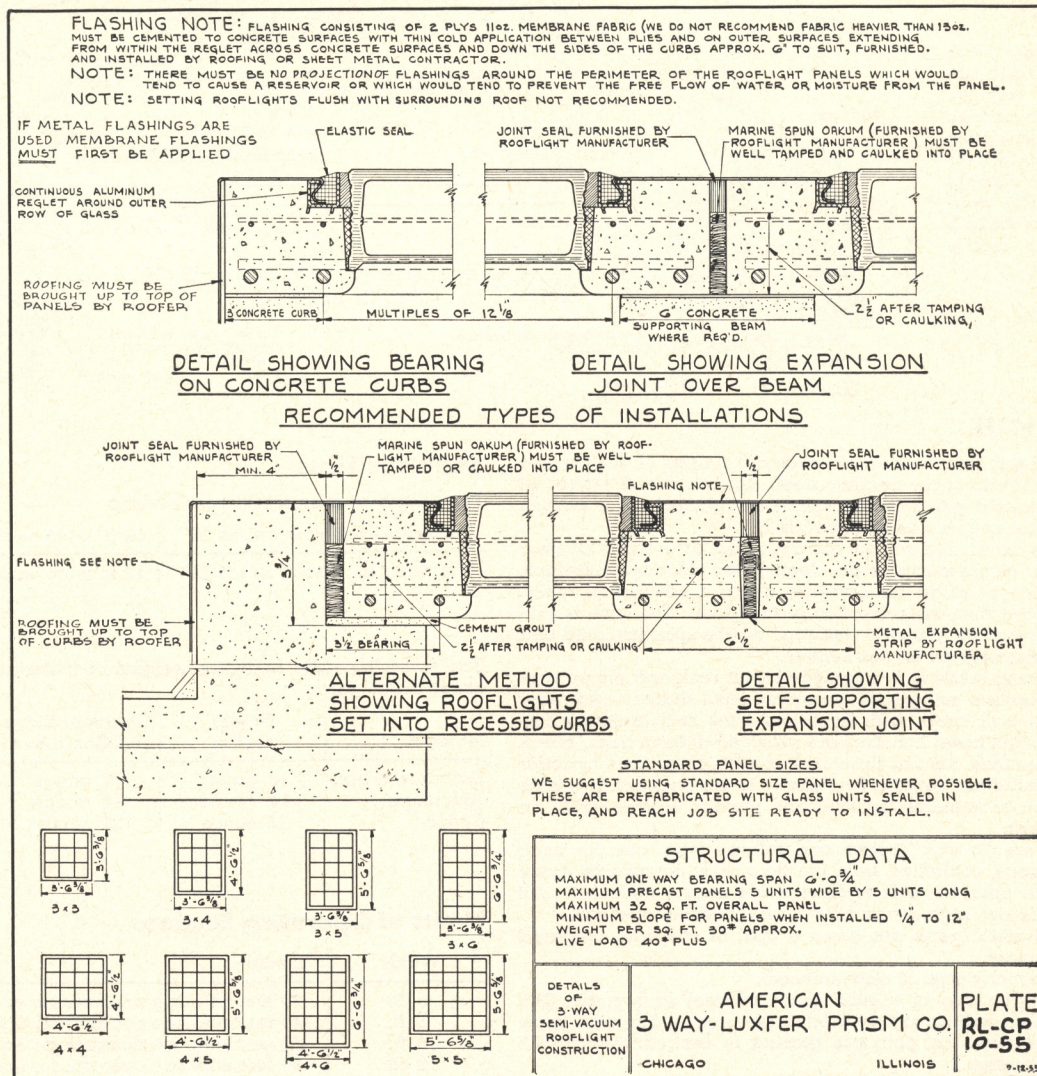
Special sizes may be made with reinforced concrete grids. Reinforced concrete grids should be used where special conditions exist or acid fumes might attack metal. Details of T45-2 reinforced concrete grid construction using 91M 9" square and RL-CP 10-55, 10⁵/₈" square semi-vacuum glass block No. 1016 on 12¹/₈" centers are shown on this page. Large size details available on request.

No. 91M—9" Block on 10⁵/₈" Centers



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No. 1016—10⁵/₈" Block on 12¹/₈" Centers



AMERICAN TYPE "J"

A Skylight that Ventilates

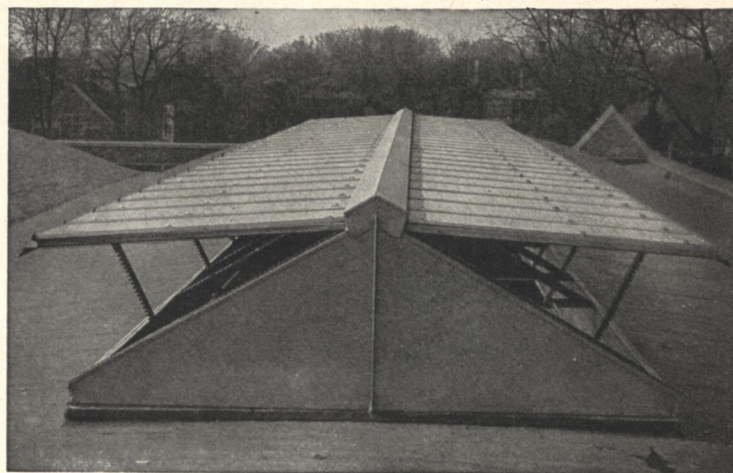
Millions of square feet of installations and an increasing volume of repeat orders on all types of industrial, commercial and educational buildings in every section of the country attest the continued popularity and dependability of American Type "J" Ventilating Skylights.

By establishing standard stock widths (see table below) and effecting quantity production, it has been possible to produce these high grade skylights at remarkably low cost. Stock sizes, ventilating full length, may be purchased for a nominal extra cost per square foot over the average stationary or fixed skylight.

For food processing plants, we recommend openings be protected by built-in insect screens, easily removable for cleaning. These screens are available at small additional cost.

Motor operating equipment may be applied to standard brake type operators.

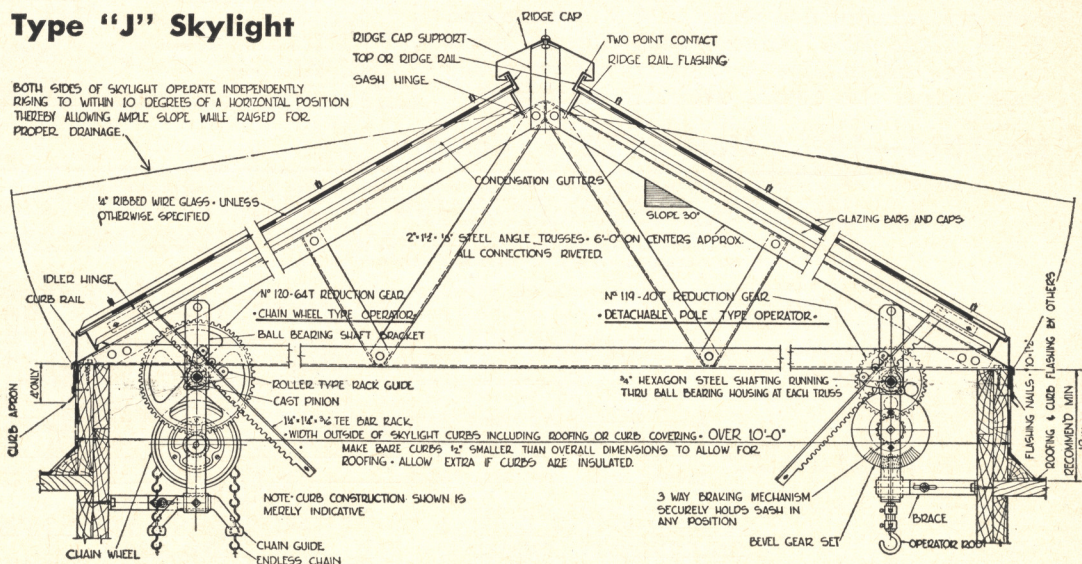
Write for details on our complete line of ventilating skylights and accessories.



Detail of 12 Ft. Type "J" Skylight

VERY IMPORTANT

Our skylights are made to fit an overall curb size including curb covering, so if curbs are covered with roofing or insulating material allow for the thickness of this material in determining the overall dimensions of the curb you furnish to receive these skylights.



SPECIFICATIONS

All sash members, ridge and gable ends are formed of #18 gauge tite-coat galvanized copper bearing steel. Curb apron is formed of #24 gauge tite-coat galvanized copper bearing steel. (For gauges in aluminum and copper see table below.)

The sash is assembled without the use of solder; cleated together in such manner as not to expose the cleats to the weathering surface. Ample provision is made for carrying away condensation which may be delivered from the underside of the glass. The sash is supported on steel trusses, properly designed for the span involved and spaced approximately six feet on centers.

The ventilating sections are equipped with rack and pinion type operating mechanism using solid hexagonal steel shafting and roller pinions. Brass ball races with hardened steel ball bearings contained in dust tight brass housings are provided at each truss. Racks are steel tee sections, held in close contact with the pinions by roller guides. The racks are not attached directly to the sash but to a sash hinge, designed to equalize the load and prevent uneven strain on any one sash bar.

Operators are "3-Way" brake and release type, one for each ventilating section, controlled from the floor with detachable crank handle. (Same operator with endless chain control optional.) All operating gears are high grade close grain machine castings.

All ferrous metal parts are given a coat of specially prepared paint at the factory.

Glazing—(specify type of glass desired).

The glass is bedded in a good grade of steel sash putty. The putty is protected with a cap secured to the glazing bar with studs and brass cap nuts. (If puttyless glazing is desired, specify P-2 puttyless construction.)

Standard Sizes

Any length, to even feet if possible and

6 ft. wide each sash raises 18"	10 ft. wide each sash raises 30"
8 ft. wide each sash raises 24"	12 ft. wide each sash raises 36"

The following table indicates weights of material used for various sheet metal parts:

Material	Gauge of Bar	Gauge of Ridge and Gable Ends	Gauge of Curb Flashing
Galvanized Iron	18 gauge	18 gauge	24 gauge
Aluminum	14 gauge	18 gauge	20 gauge
Copper	32 ounce	20 ounce	16 ounce

Limits of Operating Sections

Width	Limits
6 ft.	40 feet with one operator for each side
8 ft.	40 feet with one operator for each side
10 ft.	30 feet with one operator for each side
12 ft.	30 feet with one operator for each side

AMERICAN TOP HUNG SASH Of Extruded Aluminum

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Ame

SPECIFICATIONS

American Top Hung Sash shown on the plan shall be manufactured by the American 3 Way-Luxfer Prism Company and shall be formed of aluminum sections.

Sash bars, top and bottom rails shall be extruded aluminum shapes, the sash bars formed to provide condensation gutters draining through bottom rail to outside. Sash members shall be bolted together using $\frac{3}{8}$ " aluminum cap screws. The top rails shall be so formed as to provide a continuous hinge in combination with the hinge plate. The sash bars shall be spaced 24" on centers and shall be provided with glazing caps formed of #18 gauge aluminum secured to the bars with #10-24 round head aluminum machine screws. All flashing and panels shall be formed of sheet aluminum as shown on details using gauges noted.

The ventilating sections shall be equipped with rack and pinion type operating mechanism using solid hexagonal steel shafting and roller type pinions. Provide brass ball race with hardened steel ball bearings contained in dust tight brass housings at 4'0" centers. Racks shall be steel tee sections and shall be held in close contact with the pinions by roller guides.

Operators shall be "3-Way" brake and release type, one for each ventilating section, controlled from the floor with detachable crank handle. (Same operator with endless chain control optional.) All pinions shall use hardened steel rollers.

All ferrous metal parts shall be given a shop coat of paint at the factory.

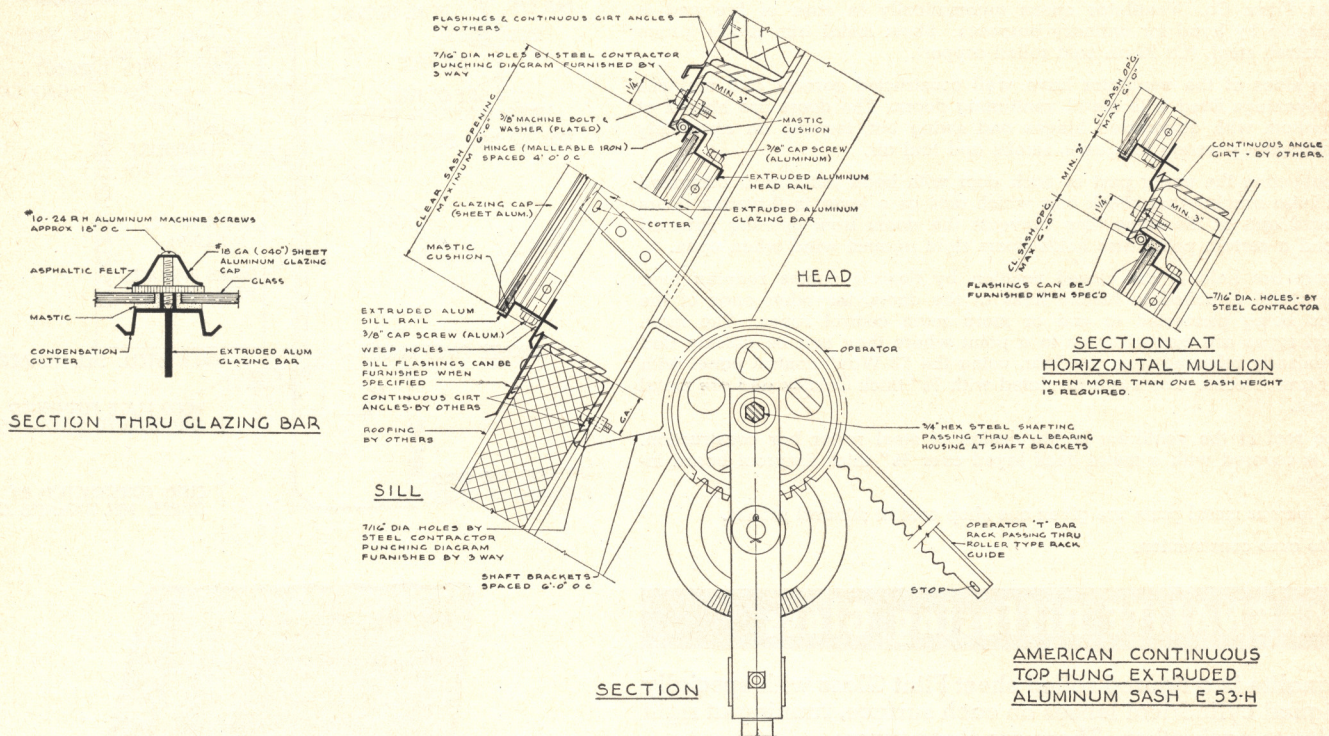
Sash shall be glazed with (specify type of glass desired). The glass shall be bedded in a mastic cushion as shown. This material shall be protected with a cap secured to the glazing bar with aluminum machine screws. Furnish an asphalt impregnated felt strip under the glazing cap.

Standard Sizes

Any length to even feet if possible; any height to 6'0".

Limits Of Operating Sections

Sash Height	Limits	Sash Height	Limits
3 ft.	60 lineal feet	5 ft.	50 lineal feet
4 ft.	54 lineal feet	6 ft.	44 lineal feet



AMERICAN CONTINUOUS
TOP HUNG EXTRUDED
ALUMINUM SASH E 53-H



Interior



Exterior

AMERICAN Stage Ventilator No. 67-M

Automatic in case of fire. Flames shoot upwards, which prevents spreading of fire and danger of panics. A combined ventilator and weatherproof skylight for use in theatres, moving-picture houses, public, parochial and high schools, auditoriums, temples, etc.

Shutters for opening skylight are hand-operated, but may be slammed wide open instantly by cutting the rope. In case of fire, the fusible links are melted or ropes burn and shutters open automatically.

Scientifically constructed with provisions for daylighting and ventilation besides its safety features. Weatherproof—impervious to rain, snow, ice or sleet.

SPECIFICATIONS

American No. 67-M Stage Vents are manufactured by American 3 Way-Luxfer Prism Co. Ventilator opens automatically in case of fire and is adjustable by hand for ordinary purposes. Sheet metal trim is #24 gauge galvanized steel. (Or 16 oz. cold rolled copper).

The sides of the ventilator have well constructed corners and mullions with openings fitted with metal ventilating doors. The doors are hinged at the bottom with galvanized hinges and swing out, leaving an absolutely unobstructed passage for gases, smoke and foul air.

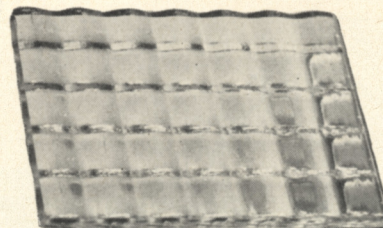
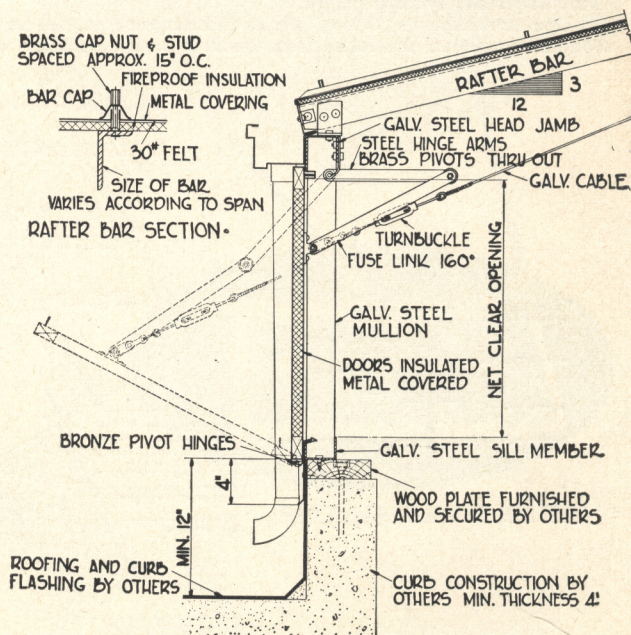
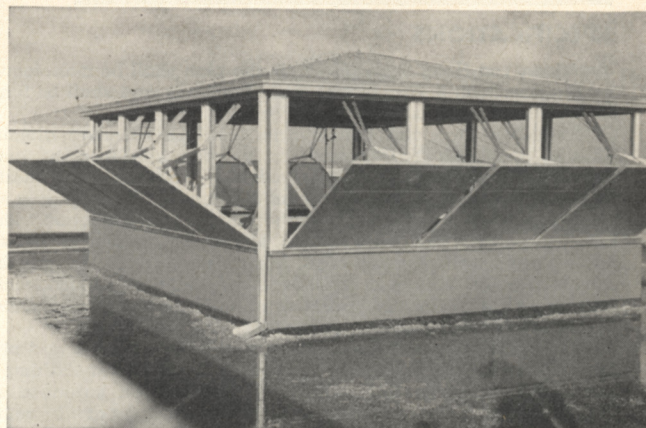
Connecting the upper part of each door with head jamb, is a combined jack knife bracket and check arm which acts as a lever in thrusting doors outward and at the same time prevents the doors from opening outward beyond a certain point, also holds doors rigid against wind when open.

Doors are held in the closed position by flexible cables running over pulleys and attached to fusible links at the doors, the other ends of the cables being connected to one or more main control ropes. The main control ropes are carried down to a point where they can be quickly and conveniently released from the floor, using the "3 Way" control panel with lever arm release. Doors are insulated with $\frac{7}{8}$ " thick Celotex and are metal covered.

The roof of the ventilator is hip design of steel rafter bar construction. Roof is covered with a metal deck layed over $\frac{3}{8}$ " thick fireproof board insulation.

All ferrous metal parts are given one shop coat of mineral primer.

Note curb construction.



Magnalite "A"

MAGNALITE Diffusing Glass

Magnalite is a figured rolled sheet Flint Glass with specially designed cylindrical lenses on each surface, running at right angles to each other. There are three types:

Magnalite "A" is made with the lenses approximately $\frac{1}{2}$ " on centers.

Plain— $\frac{1}{4}$ " thick.

Magnalite "B" is very similar to Magnalite "A" except in the size of the cylindrical lenses. The Magnalite "B" lenses are approximately $\frac{1}{4}$ " on centers. Plain— $\frac{1}{4}$ " thick; Magnalite "B" wired— $\frac{3}{16}$ " thick—Misco Mesh.

Furnished for warehouse stocks in standard stock sheets up to 48" wide in even inches. Maximum width sheets up to 60". Various lengths.

Magnalite "A" is recommended for general use and decorative purposes in all types of building. Magnalite "B" is recommended for strictly functional purposes and where glass sizes are small and close to vision. Magnalite "B" wired is used in flush ceiling lights, below any type of skylight or top lighting arrangement.

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