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SIZE (WIDTH)

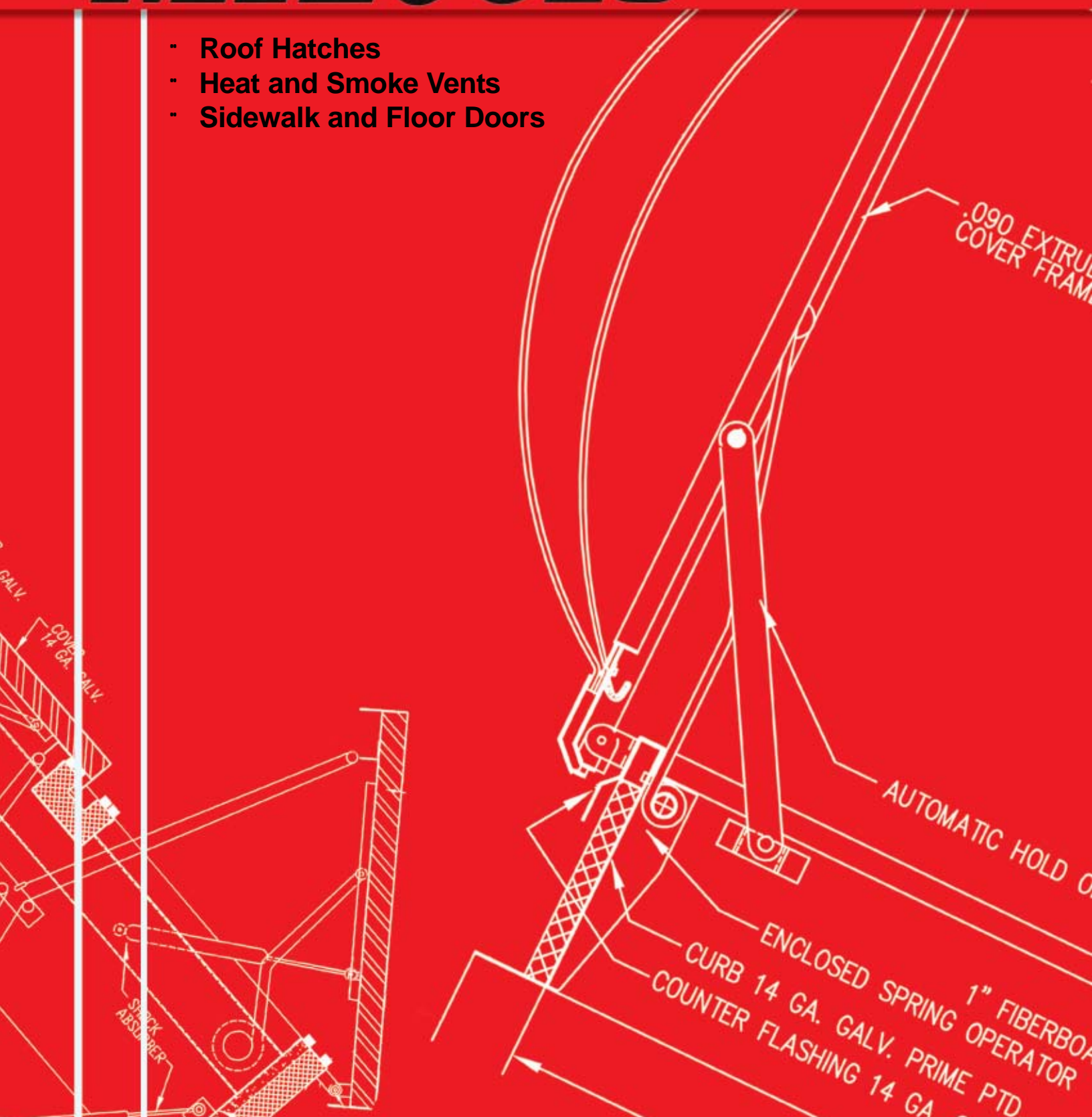
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MILCOR

- Roof Hatches
- Heat and Smoke Vents
- Sidewalk and Floor Doors



Experience

Milcor brings over 105 years of experience in the manufacturing of a broad range of products.

Engineering

Every Milcor vent, hatch or door product is engineered to meet the specific in-use requirements of the application for which it was designed.

Selection

The Milcor product line contains the items to meet your construction needs.

On-Time Delivery

Milcor appreciates the need for on-time delivery of our products to meet your schedules.

Quality

Milcor smoke vents, roof hatches and floor doors provide superior performance features unequaled elsewhere in the industry.

Warranty

Milcor warrants all goods sold to be free from defects in workmanship, but limits liability to five years from date of shipment and expressly to the replacement of goods not complying with this warranty; or, at our election, a credit to original purchaser for the original purchase price paid less 1/60th of the price for each month elapsed from the original invoice date to the date of claim against this warranty.

Electric motors, special finishes and any other optional special components required shall be warranted separately by the manufacturers of those products.

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Overall Product Benefits

- **EASY COMPLETE OPENING**

Milcor hatch covers open easily to 90 degrees. Operation is assisted by enclosed torsion bar or torsion coil spring operators. Automatic hold-open arms keep doors securely open.

- **UNOBSTRUCTED OPENING**

The clear hatch opening is virtually unobstructed, with only a narrow hold-open arm at one corner and the torsion bar or spring mounted out of the way in the cover or frame.

- **COMPLETE SEAL**

Heavy, closed cell, rubber gaskets factory-applied to the units provide a barrier to weather penetration and drafts. Latching devices with inside and outside handles hold hatches tightly closed.

- **CHOICE OF MATERIALS**

Hatches are available in several materials, including galvanized steel, aluminum, aluminum cover/galvanized steel curb or stainless steel. Galvanized steel is prime painted with rust inhibiting primer.

- **THERMAL EFFICIENCIES**

Hatch covers are insulated to keep heat in during winter and to repel the sun's heat in summer. M, RBS and RCS Models feature composite-design cover construction for insulating efficiency. The rigid polystyrene foam insulation in the covers provides U-factors ranging from 0.093 to 0.173. Milcor roof hatches are also available in RB, RC and RD models with fiberglass-insulated covers providing a U-value of 0.26. Curbs are insulated with 1" thick rigid fiberboard insulation.

- **HIGH LOAD CAPACITY**

M, RBS and RCS models composite cover design provides load-carrying strengths to 70 psf. RB, RD and RC models can carry live loads up to 40 psf.

- **COMPLETE SELECTION**

Milcor roof hatches are available in single- and double-leaf configurations, depending upon the size of the units. Single-leaf M and RBS and RD-1 models are available in 3' x 2'-6" and 3' x 3' with a torsion bar mounted in the cover. RB, RC and most other RD models are available in all sizes with the springs mounted on the frame, offering added strength with larger sizes. Standard size double-leaf units range from 5' x 11' to 8' x 8'.

- **SPECIAL UNITS**

Hatches can be fabricated in special sizes, shapes, or other modifications to meet special needs. Consult the Milcor factory for details.

Roof Hatch Options

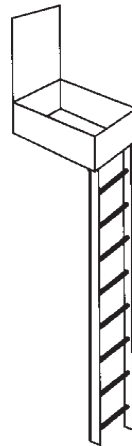
Stainless Steel Hardware

For Installation in highly corrosive environment, roof hatches are available with stainless steel hardware.

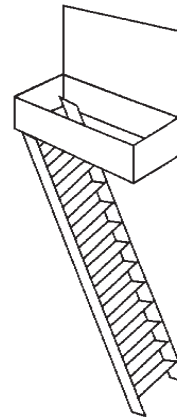
Motorized

Roof hatches can be equipped with motor operators for opening and closing the covers from a remote 3-position selector switch.

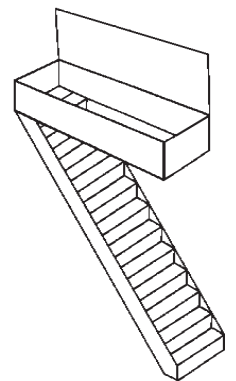
LADDER ACCESS
Minimum 2'6"x3'0"



SHIP STAIR
Minimum 2'6"x4'6"



SERVICE STAIR
Minimum 2'6"x8'0"

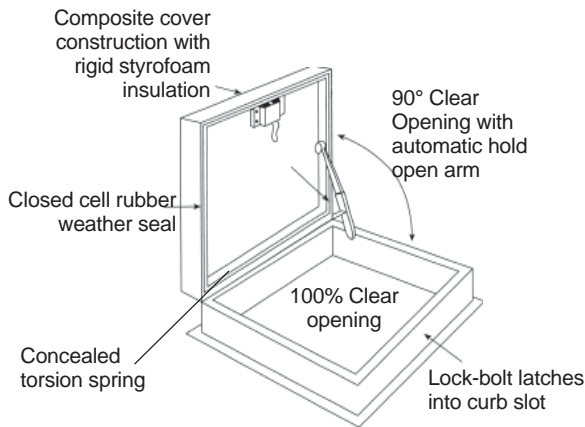


Selecting the Proper Size Hatch

The angle at which a person ascends to the roof determines the size hatch required for convenient use. If a ladder is used, the hatch may be rather small since the person comes straight up to the roof. As the angle of ascent decreases, the hatch must be larger to prevent head-bumping accidents. Recommended minimum sizes for various types of roof access are shown above. If movement of bulky materials through the hatch is anticipated, double-leaf hatches with openings up to 66 sq. ft. or larger are available. Recent changes to the International Building Code require 16 sq. ft openings as the standard for various structures.

Note-the second dimension on hatch sizes denotes the length on the hinge side.

Single Leaf: Spring Mounted in Cover



• Access and Ventilation

Provides convenient access to the building's roof. May be open for auxiliary ventilation.

• Unobstructed Opening

Narrow hold-open arm and torsion bar are mounted out of the way in the cover. Hasp is clear of opening.

• High Load Capacity

The composite cover design on M, RBS, RCS and RD-1 Models provides load-carrying strengths to 70 psf.

• Easy, Complete Opening

Covers open easily to 90°. Torsion spring and automatic hold-open arms assist operation and keep doors securely open.

• Complete Seal

Heavy, mechanically-applied weather seal provides a barrier to weather and drafts. Latches with inside and outside handles hold hatches tightly closed, allowing easy access from inside or outside the hatch.

• Choice of Materials

Hatches are available in galvanized steel, aluminum, aluminum cover with galvanized curb or stainless steel.

• High Thermal Efficiency

Covers are insulated with 1 inch of high efficiency styrofoam insulation. Keeps heat in during winter and repels heat in summer. Frames are insulated with 1 inch exterior fiberboard insulation.

• Custom Units

Hatches can be fabricated in special sizes, shapes or other modifications to meet special needs such as are required for:

- Metal Roofs
- Corrosive Environments
- Domed units
- Curb Mounted Units
- High Security
- Higher r-value insulation

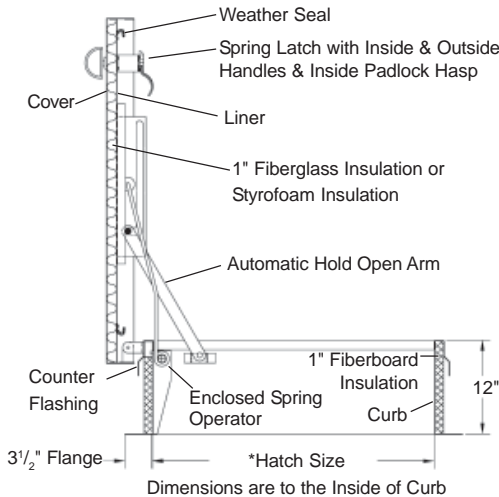
Standard Sizes and Model Number*

Single Leaf Units, Spring Mounted in Cover (Second dimension is for length on hinge side.)

Materials	3' 0" x 2' 6"		3' 0" x 3' 0"	
	Model No.	Lbs.	Model No.	Lbs.
Galvanized Steel, Prime Painted	M-1	185	M-3x3	254
Galvanized Steel, Prime Painted	RBS-1	155	-	-
Aluminum Cover, Galvanized Curb	RCS-1	120	RCS-3x3	190
Aluminum Cover and Curb	RD-1	125	-	-

*Special made-to-order sizes are available for each model

Single Leaf: Spring Mounted in Frame



• Access and Ventilation

Provides convenient access to the building's roof. May be opened for auxiliary ventilation.

• Multiple Sizes

Using heavy-duty enclosed torsion spring design, which is mounted in the hatch frame, the opening assist is especially enhanced when used on larger units.

• Powerful Load Capacity

RB, RD and RC models handle live loads up to 40 psf, standard industry strength. Milcor's M, RBS RCS and RDS models, with composite cover design, provide load-carrying strengths to 70 psf.

• Complete Seal

Heavy, mechanically-applied weather seal provides a barrier to weather and drafts. Latches with inside and outside handles hold hatches tightly closed, allowing easy access from inside or outside the hatch.

• Choice of Materials

Hatches are available in galvanized steel, aluminum, aluminum cover with galvanized curb or stainless steel.

• High Thermal Efficiency

M, RBS, RBS-S, RDS-S and RCS covers are liner bonded to a 1 or 2 inch core of rigid styrofoam-type insulation for high efficiency thermal protection. RB, RD and RC covers contain the industry standard 1" of rigid fiberglass insulation. Both types keep the heat in during the winter and the heat out in the summer. Curbs have 1" exterior fiberboard as a standard feature.

• Custom Units

Hatches can be fabricated in special sizes, shapes or other modifications to meet special needs, such as required with:

- Smoke Hatches
- High Security
- Metal Roofs
- Skylight Domes
- Curb Mounted Units
- Corrosive Environments

Standard Sizes and Model Numbers*

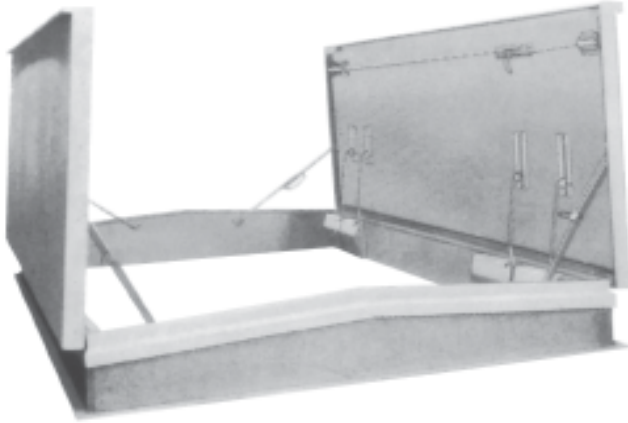
Single Leaf Units, Spring mounted in Frame (Second dimension is for length on hinge side.)

Materials	3' 0" x 2' 6"		3' 0" x 3' 0"		4' 0" x 4' 0"		2' 6" x 4' 6"		**2' 6" x 8' 0"	
	Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.
Galvanized Steel	RB-1	205	-	-	RB-4x4	365	RB-2	255	RB-3	425
Galvanized Steel	-	-	-	-	M-7	365	M-2	265	M-3	395
Galvanized Steel	RBS-S (Smoke)	155	-	-	RBS-4X4	271	RBS-2	225	RBS-3	335
Alum Cover/ Galv Curb	-	-	-	-	-	-	RCS-2	140	RCS-3	230
Alum Cover/ Galv Curb	RC-1	160	-	-	-	-	RC-2	174	RC-3	307
Alum Cover and Curb	RDS-S (Smoke)	85	RD-3x3	155	-	-	RD-2	136	RD-3	248

*Special made-to-order sizes are available for each model.

**Covers larger than 4' 6" have a 2-point snap latch with inside and outside handles and inside padlock hasp.

Double Leaf: Spring Mounted in Frame



- **Provides Large Roof Opening**

Milcor Double-Leaf Roof Hatches are designed for access where additional opening size is required.

- **Easy, Complete Opening**

Heavy-duty torsion coil spring operators, enclosed and located in frame, provide easy opening and closing of the hatch covers. A two-point latch assures tight, secure closure. Operating handles are provided for access from inside or outside.

- **Automatic Hold-Open Arms**

Hold-open arms automatically lock the doors at 90° to prevent over-travel when doors are opened.

- **Flawless Weather Seal**

Sloped covers are mounted to steel pintle hinges and are made weathertight with a closed-cell rubber seal.

- **Choice of Materials**

Hatches are available in galvanized steel, aluminum, or aluminum covers with a galvanized curb.

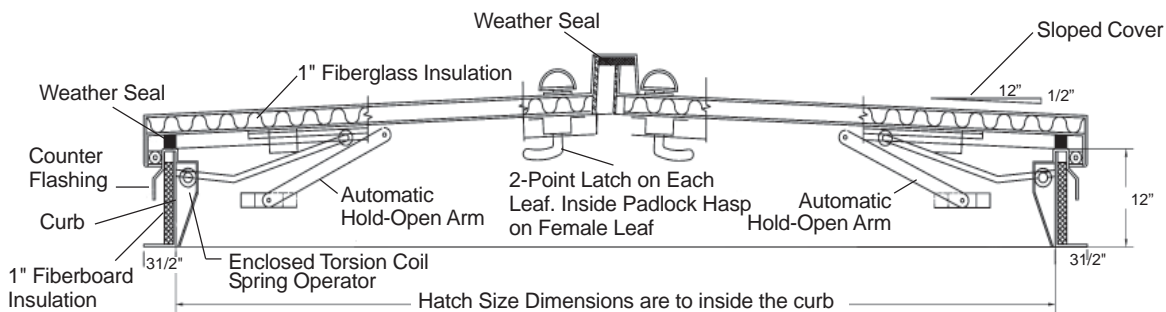
- **Effective Insulations**

1 inch insulation in cover and on curb keeps heat in during winter months and repels heat throughout the summer.

- **Custom Units**

Hatches can be fabricated in special sizes, shapes or other modifications to meet special needs, such as required with:

- Skylight Domes
- Curb Mounted
- High Security
- Metal Roofs



Standard Sizes and Model Number*

Double Leaf Units (Second dimension is for length on hinge side.)

Materials	5' 0" x 11' 0"		6' 0" x 11' 0"		8' 0" x 8' 0"	
	Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.
Galvanized Steel, Prime Painted	RB-4	1831	RB-5	2060	-	-
Aluminum Cover, Galvanized Curb	RC-4	1220	RC-5	1332	RC-6	1220
Aluminum Cover and Curb	RD-4	1055	RD-5	1166	RD-6	1055

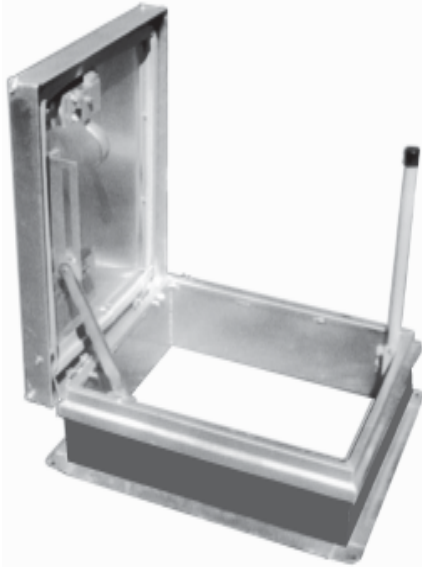
*Special made to order sizes are available for each model.

Units over 7'0" in either direction may require shipment in two sections. Units exceeding sizes above may require removable center mullion.

Upright Safety Bar

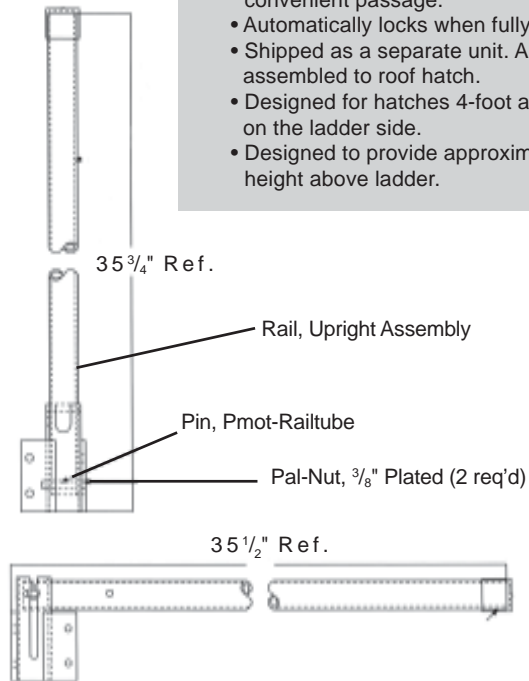
The Milcor Upright Safety Bar is designed to assist in the safe passage when exiting and entering the roof hatch. A heavy-duty, hinged steel mechanism allows the upward and downward movement of the bright yellow safety bar.

No need to attach bar to center of ladder rungs. Milcor's Upright Safety Bar has been designed to provide the safest way to exit and enter a roof hatch without restricting the opening or footing on the top rungs of the ladder.



Quality Design and Construction

- Simple and safe lift-and-lock into place movement.
- Side location for safer and more convenient passage.
- Automatically locks when fully extended.
- Shipped as a separate unit. Also available assembled to roof hatch.
- Designed for hatches 4-foot and smaller on the ladder side.
- Designed to provide approximately 42" height above ladder.

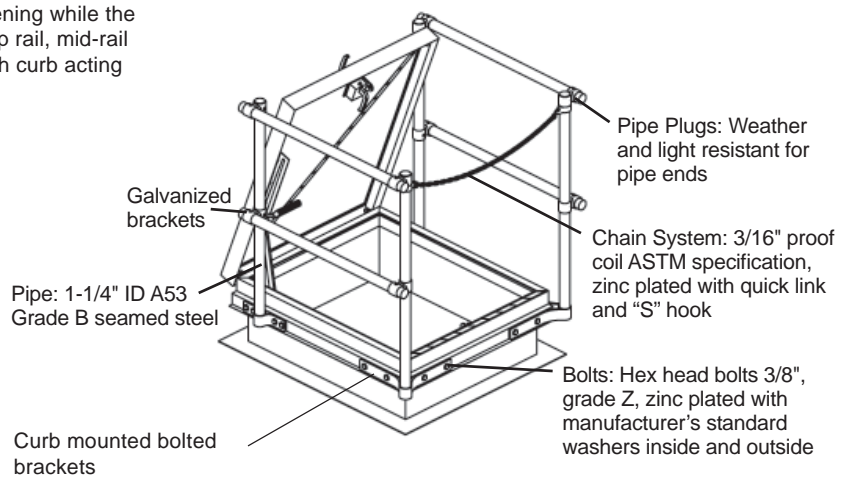


Safety Railing

The Milcor safety rail is designed to aid in safe passage through the roof hatch and to protect the roof opening while the hatch is open. The railing system consists of a top rail, mid-rail and chain or optional swinging gate with the hatch curb acting as the toe plate.



MEETS OSHA REQUIREMENTS



Strong Steel Construction
Maintains Original Strength.
Does Not Become Brittle or Lose Strength
Due to Prolonged Exposure to UV Deterioration

Single Leaf Hatches

Model No.	Item No.	Size	Typical Access	Opening Operator	Cover Insulation	External Cover	Internal Cover	12" Curb
M-1	3501-501-9	3'0"x2'6"	Ladder	Torsion Bar	1" Rigid Foam	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RB-1	3501-112-9	3'0"x2'6"	Ladder	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RBS-1	3501-111-9	3'0"x2'6"	Ladder	Torsion Bar	1" Rigid Foam	18 Ga. Galv.	22 Ga. Galv.	16 Ga. Galv.
RC-1	3501-122-9	3'0"x2'6"	Ladder	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	14 Ga. Galv.
RCS-1	3501-121-9	3'0"x2'6"	Ladder	Torsion Bar	1" Rigid Foam	.063 Alum.	.063 Alum.	16 Ga. Galv.
RD-1	3501-132-9	3'0"x2'6"	Ladder	Torsion Spring	1" Rigid Foam	.090 Alum.	.063 Alum.	.090 Alum.
M-3x3	3501-410-9	3'0"x3'0"	Ladder	Torsion Bar	1" Rigid Foam	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RCS-3x3	3501-610-9	3'0"x3'0"	Ladder	Torsion Bar	1" Rigid Foam	.063 Alum.	.063 Alum.	16 Ga. Galv.
RD-3x3	3501-710-9	3'0"x3'0"	Ladder	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.
M-7	3501-515-9	4'0"x4'0"	Ladder	Torsion Spring	1" Rigid Foam	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RB-4x4	3501-304-9	4'0"x4'0"	Ladder	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RBS-4x4	3501-302-9	4'0"x4'0"	Ladder	Torsion Spring	1" Rigid Foam	18 Ga. Galv.	22 Ga. Galv.	16 Ga. Galv.
M-2	3501-511-9	2'6"x4'6"	Ship Stair	Torsion Spring	1" Rigid Foam	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RB-2	3501-115-9	2'6"x4'6"	Ship Stair	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RBS-2	3501-116-9	2'6"x4'6"	Ship Stair	Torsion Spring	1" Rigid Foam	18 Ga. Galv.	22 Ga. Galv.	16 Ga. Galv.
RC-2	3501-125-9	2'6"x4'6"	Ship Stair	Torsion Spring	Fiberglass	.090 Al	.063 Alum.	14 Ga. Galv.
RCS-2	3501-124-9	2'6"x4'6"	Ship Stair	Torsion Spring	1" Rigid Foam	.063 Alum.	.063 Alum.	16 Ga. Galv.
RD-2	3501-135-9	2'6"x4'6"	Ship Stair	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.
M-3	3501-512-9	2'6"x8'0"	Service Stair	Torsion Spring	1" Rigid Foam	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RB-3	3501-118-9	2'6"x8'0"	Service Stair	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RBS-3	3501-119-9	2'6"x8'0"	Service Stair	Torsion Spring	1" Rigid Foam	18 Ga. Galv.	22 Ga. Galv.	16 Ga. Galv.
RC-3	3501-128-9	2'6"x8'0"	Service Stair	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RCS-3	3501-127-9	2'6"x8'0"	Service Stair	Torsion Spring	1" Rigid Foam	.063 Alum.	.063 Alum.	16 Ga. Galv.
RD-3	3501-138-9	2'6"x8'0"	Service Stair	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.

Torsion Bar available only in Single Leaf Mounted in Cover

Torsion Spring available only in Single Leaf Mounted in Frame

Double Leaf Hatches

Model No.	Item No.	Size	Access Style	Opening Operator	Cover Insulation	External Cover	Internal Cover	12" Curb
RB-4	3501-212-9	5'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RC-4	3501-222-9	5'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	14 Ga. Galv.
RD-4	3501-232-9	5'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.
RB-5	3501-215-9	6'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	14 Ga. Galv.	22 Ga. Galv.	14 Ga. Galv.
RC-5	3501-225-9	6'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	14 Ga. Galv.
RD-5	3501-235-9	6'0"x11'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.
RC-6	3501-228-9	8'0"x8'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	14 Ga. Galv.
RD-6	3501-238-9	8'0"x8'0"	Equipment Access	Torsion Spring	Fiberglass	.090 Alum.	.063 Alum.	.090 Alum.

Smoke Hatches (Operate as a roof hatch or heat and smoke hatch with 165 degree fusible link.)

Model No.	Item No.	Size	Access Style	Opening Operator	Cover Insulation	External Cover	Internal Cover	12" Curb
RBS-S	3501-305-9	3'0"x2'6"	Ladder	Torsion Spring	1" Rigid Foam	18 Ga. Galv.	22 Ga. Galv.	16 Ga. Galv.
RDS-S	3501-310-9	3'0"x2'6"	Ladder	Torsion Spring	1" Rigid Foam	.090 Alum.	.063 Alum.	.090 Alum.

Single Leaf Hatches

Model No.	Exterior Curb Insulation	Bottom Mtg. Flg.	Finish	Inside & Outside Handles	Inside Padlock Hasp	Weight Estimate	Page No.
M-1	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	185	4
RB-1	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	205	5
RBS-1	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	155	4
RC-1	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	160	5
RCS-1	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	120	4
RD-1	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	125	5
M-3x3	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	254	4
RCS-3x3	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	190	4
RD-3x3	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	155	5
M-7	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	365	5
RB-4x4	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	365	5
RBS-4x4	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	271	5
M-2	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	265	5
RB-2	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	255	5
RBS-2	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	225	5
RC-2	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	174	5
RCS-2	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	140	5
RD-2	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	136	5
M-3	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	395	5
RB-3	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	425	5
RBS-3	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	335	5
RC-3	1" Fiberboard	3-1/2" wide	Primed Gray	Yes	Yes	307	5
RCS-3	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	230	5
RD-3	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	248	5

Double Leaf Hatches

Model No.	Exterior Curb Insulation	Bottom Flange	Finish	Inside & Outside Handles	Inside Padlock Hasp	Weight Estimate	Page No.
RB-4	1" Fiberboard	3-1/2" wide	Prime Paint	Yes	Yes	1831	6
RC-4	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	1220	6
RD-4	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	1055	6
RB-5	1" Fiberboard	3-1/2" wide	Prime Paint	Yes	Yes	2060	6
RC-5	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	1332	6
RD-5	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	1166	6
RC-6	1" Fiberboard	3-1/2" wide	Curb Gray/ Cover Mill	Yes	Yes	1220	6
RD-6	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	1055	6

Smoke Hatches (Operate as a roof hatch or heat and smoke hatch with 165 degree fusible link.)

Model No.	Exterior Curb Insulation	Bottom Flange	Finish	Inside & Outside Handles	Inside Padlock Hasp	Weight Estimate	Page No.
RBS-S	1" Fiberboard	3-1/2" wide	Prime Paint	Yes	Yes	155	5
RDS-S	1" Fiberboard	3-1/2" wide	Mill Finish	Yes	Yes	125	5

Single Leaf: Spring Mounted in Cover

Guide Specification

Milcor single leaf roof hatches with the spring mounted in cover includes models: M, RCS, RBS, and RD-1. Sizes and other properties are as indicated on pages 4 and 8-9.

Frame

M Models: 14-gauge prime-painted galvanized steel, with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

RCS and RBS Models: 16-gauge prime-painted galvanized steel with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

RD-1 Model: Mill finish .090 aluminum with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

Covers

M Model: High-strength, composite panels with 14-gauge prime-painted galvanized steel, 22-gauge galvanized steel liner bonded to core of 1" rigid foam-type insulation.

RCS and RBS Model: Composite panels with 18-gauge prime-painted galvanized steel exterior and 22-gauge prime-painted galvanized steel liner (RBS Style), or .063 aluminum exterior and .063 aluminum liner, bonded to a 1" rigid foam-type insulation (RCS Style).

RD Model: Composite panels with 11-gauge aluminum (.090 aluminum) and .063 aluminum liner bonded to a core of 1" rigid styrofoam insulation.

Torsion Bar

Cover operation is assisted by a torsion bar mounted within the confines of the cover.

Cover Mounting

Covers are mounted on steel pintle hinges, complete with closed-cell rubber weather seal, automatic locking hold-open arms, inside and outside latching devices, handles and inside padlock hasp.

Hardware

All hardware is zinc or cadmium plated.

Single Leaf: Spring Mounted in Frame

Guide Specification

Milcor single leaf roof hatches with the spring mounted in frame includes models: M, RB, RBS, RC, RCS, RD and RDS. Sizes and other properties are as indicated on pages 5 and 8-9.

Frame

M, RC and RB Models: 14-gauge, prime-painted galvanized steel, with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flange with pre-drilled holes, and 1" exterior fiberboard insulation.

RBS and RCS Models: 16-gauge prime-painted galvanized steel, with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

RD and RDS-S Models: Mill finish 11-gauge (.090 aluminum), with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

Covers

M and RB Models: High-strength panels with 14-gauge, prime-painted steel exterior and 22-gauge galvanized steel liner bonded to core of 1" rigid foam-type (M Style) or 1" fiberglass insulation (RB Style).

RBS and RCS Models: Composite design panels with 18-gauge prime-painted galvanized steel exterior and 22-gauge prime painted steel liner (RBS Model), or .063 aluminum exterior and .063 aluminum liner bonded to a 1" core of rigid styrofoam insulation.

RD and RC Models: Mill finish 11-gauge aluminum (.090 aluminum) exterior with .063 aluminum liner and 1" fiberglass insulation.

Torsion Spring

Cover operation is assisted by enclosed heavy-duty torsion spring operators attached to the curb frame.

Cover Mounting

Covers are mounted on steel pintle hinges, complete with closed-cell rubber weather seal, automatic locking hold-open arms, inside and outside latching devices, handles and inside padlock hasp.

Hardware

All hardware is zinc or cadmium plated.

Double Leaf: Spring Mounted in Frame

Guide Specification

Milcor double leaf roof hatches with springs mounted in the frame. Includes models: RB, RC, and RD. Sizes and other properties are as indicated on pages 6 and 8-9.

Frame

RB and RC Models: 14-gauge prime-painted galvanized steel with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

RD Models: Mill finish 11-gauge (.090 aluminum) with a 12" high curb, integral counterflashing, 3-1/2" wide mounting flanges with pre-drilled holes, and 1" exterior fiberboard insulation.

Covers

RB Models: High-strength panels with 14-gauge, prime-painted steel exterior and 22-gauge galvanized steel liner bonded to 1" fiberglass insulation.

RD and RC Models: Mill finish 11-gauge aluminum (.090 aluminum) exterior with .063 aluminum liner with 1" fiberglass insulation.

Torsion Spring

Cover operation is assisted by enclosed heavy-duty coil spring operators attached to the curb frame.

Cover Mounting

Covers are mounted with astragal design on steel pintle hinges and are complete with a closed-cell rubber weather seal at double door closure and frame, automatic locking hold-open arms, and a two-point latch system for tight, secure closure with inside and outside handles and an inside padlock hasp.

Hardware

All hardware is zinc or cadmium plated.

Overall Product Benefits

• Vent for Heat and Smoke

Designed to automatically spring open to approximately 90 degrees in the event of a fire.

Heat and smoke vents can save lives by releasing smoke, decreasing the possibility of deadly smoke inhalation to building occupants. The open covers permit firefighters to douse flames directly from the rooftop location.

The covers are activated by the parting of a single UL listed, FM approved 165°F fusible link, and automatically lock in the fully open position. Units can be equipped with electrical links that trigger the cover opening when connected to a remote smoke or fire alarm.

• Open Against Snow or Wind

Covers are of double-leaf construction, with each leaf equipped with torsion spring operators of sufficient strength to open against a minimum 10 psf snow or wind load.

• No Over-Travel

Units are equipped with hydraulic shock absorbers to control opening speed and prevent over-travel.

• No Accidental Opening

Covers will not open when subjected to a minimum 30 psf uplift pressure. This prevents accidental openings.

• Fire Safety

Complies with the requirements of a Class "A" burning brand (UL 790).

• Easy Reset

Covers latch automatically. Manual release mechanism resets automatically when covers are closed from the roof line.

• Thermal Efficiency

Insulated covers provide a minimum thermal transmittance value of $U = 0.093$ to reduce heat loss or gain and to prevent condensation.

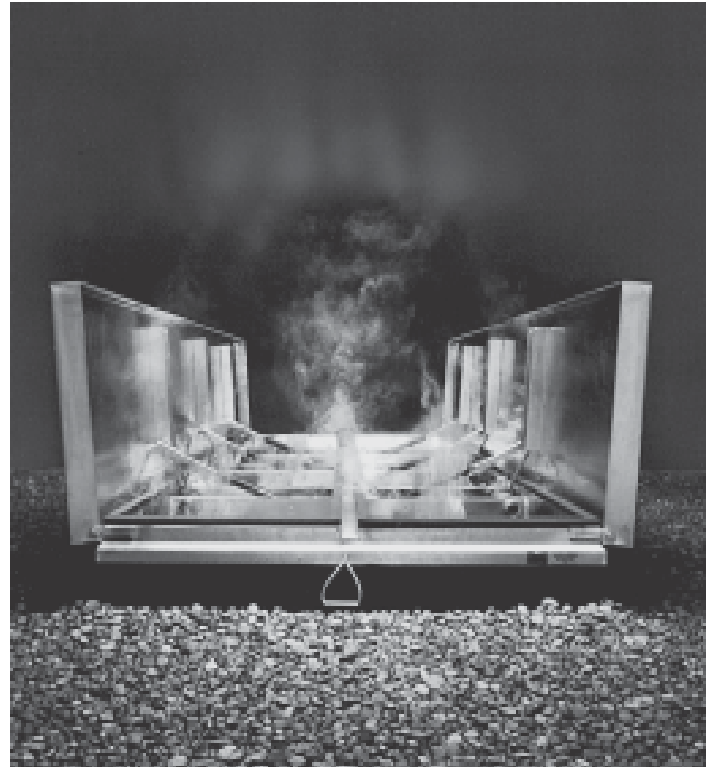
• Weathertight Performance

Covers are fully gasketed for weathertight performance. The dual covers close unto a fixed channel that permits water to flow off the unit without interfering with the cover operation.

• Choice of Materials

Most Milcor heat and smoke vents are available in three combinations of materials to meet specific design criteria:

- All Galvanized
- All Aluminum
- Aluminum Cover/Galvanized Curb



Popular Smoke Vent Options

Fusible Links

While the standard is a 165° UL Listed fusible link, for environments requiring different melt temperatures, Milcor offers fusible links designed for temperatures up to 360°.

McCabe Link

This is a multipurpose, dual-responsive and repositioning link which reacts when subject to heat and electrical current. (Electro-Thermal Link). Available in 24 volt and 120 volt.

Explosion Vents

Smoke Vents can be equipped to operate as explosion vents.

Motorized or Manual Winch Operation

Smoke vents can be equipped with motor operators for opening and closing the covers from a remote 3-position selector switch.

Metal Roof Curb Mounts

Curbs can be modified to fit most standard metal roof profiles.

Sloped To Maintain Level Operation

Curbs can be sloped to match roof slopes providing a level surface when units are installed.

Low Profile: 4'0" and 4'6" and Big Smoky® 5'0", 5'6" & 6'0"

- **Vent for Heat and Smoke**

Covers automatically spring open to approximately 90 degrees in the event of fire and automatically lock in fully open position.

- **Big Smoky® = Fewer Units**

With UL/FM approved sizes up to 6'0" x 12'0", fewer units are required. Meets code requirements while saving costs and reducing the number of rooftop penetrations.

- **Open Against Snow or Wind**

Covers are constructed with sufficient torsion spring operators to open against a minimum 10 psf snow or wind load.

- **No Over-Travel**

Units are equipped with hydraulic shock absorbers to control opening speed and prevent over-travel.

- **No Accidental Opening**

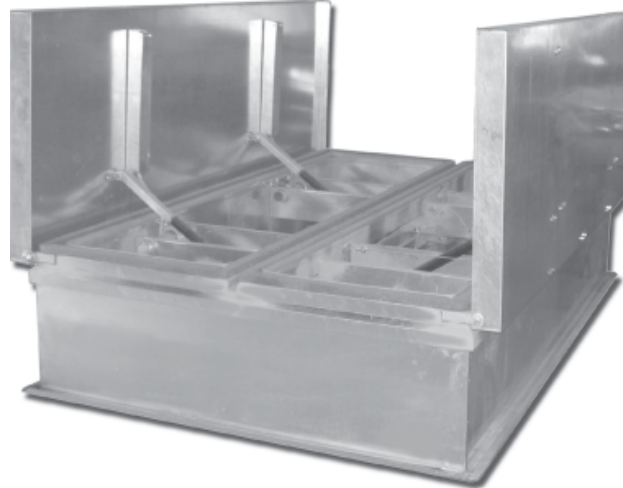
Covers will not open when subjected to a minimum uplift pressure of 30 psf, preventing accidental opening.

- **Easy Reset**

Covers latch automatically and manual release mechanism resets automatically by closing covers.

- **High Thermal Efficiency**

Insulated cover reduces heat loss or gain and prevents condensation.



- **Fire Safety**

Complies with the requirements of Class "A" burning brand test (UL 790).

- **UL/ FM Tested**

Milcor models U-LP, U-LPA, or U-LPAG automatically operating heat and smoke vents are tested and listed by Underwriter's Laboratories, Inc. and Factory Mutual Research Corporation.

- **Choice of Materials**

Vents are available in three combinations of materials to meet specific design criteria.

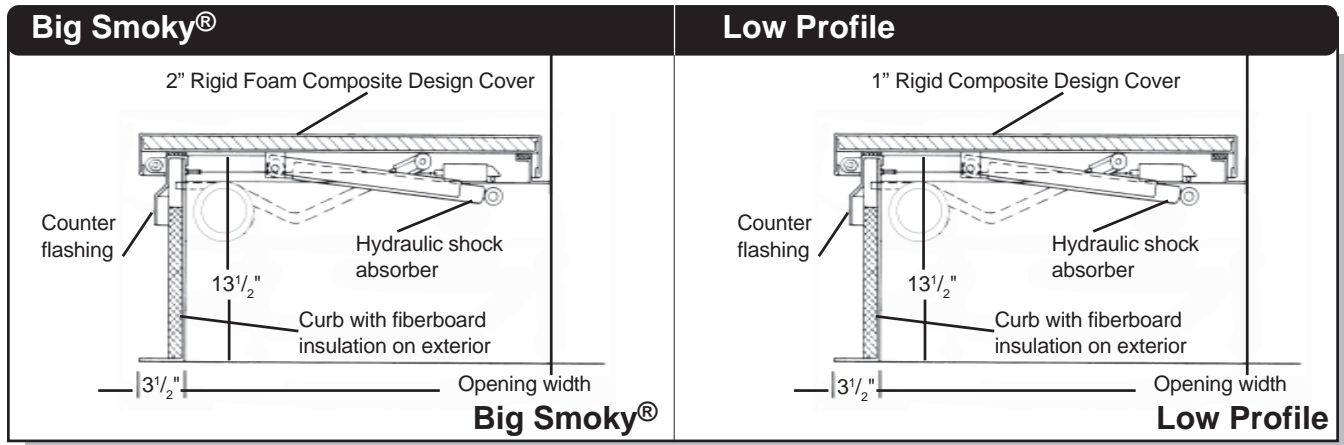
U-LP: All Galvanized

U-LPA: All Aluminum

U-LPAG: Aluminum Cover /Galvanized Curb

Milcor Heat & Smoke Vents Protect In the Event of Smoke & Fire

Opens instantly when UL listed fusible link is exposed to a temperature of 165° to release noxious smoke and deadly gases out of the building.



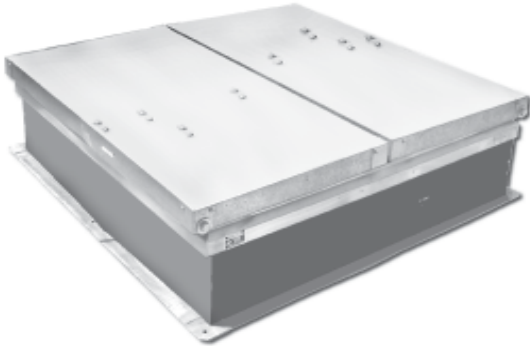
Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Model	Clear Opening Sizes	Galvanized Steel		Aluminum		Aluminum Cover & Galvanized Curb	
		Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.
Low Profile	4'0" x 4'0"	U-LP-4848	275	U-LPA-4848	205	U-LPAG-4848	250
Low Profile	4'0" x 5'0"	U-LP-4860	325	U-LPA-4860	241	U-LPAG-4860	312
Low Profile	4'0" x 6'0"	U-LP-4872	375	U-LPA-4872	284	U-LPAG-4872	337
Low Profile	4'0" x 7'0"	U-LP-4884	425	U-LPA-4884	327	U-LPAG-4884	385
Low Profile	4'0" x 7'6"	U-LP-4890	450	U-LPA-4890	336	U-LPAG-4890	407
Low Profile	4'0" x 8'0"	U-LP-4896	475	U-LPA-4896	359	U-LPAG-4896	430
Low Profile	4'6" x 4'0"	U-LP-5448	300	U-LPA-5448	225	-	-
Low Profile	4'6" x 5'0"	U-LP-5460	360	U-LPA-5460	270	-	-
Low Profile	4'6" x 6'0"	U-LP-5472	420	U-LPA-5472	320	-	-
Low Profile	5'0" x 5'0"	U-LP-6060	385	U-LPA-6060	285	U-LPAG-6060	368
Big Smoky®	5'0" x 6'0"	U-LP-6072	460	U-LPA-6072	350	U-LPAG-6072	414
Big Smoky®	5'0" x 7'0"	U-LP-6084	530	U-LPA-6084	405	U-LPAG-6084	483
Big Smoky®	5'0" x 8'0"	U-LP-6096	590	U-LPA-6096	450	U-LPAG-6096	530
Big Smoky®	5'0" x 9'0"	U-LP-60108	650	U-LPA-60108	495	U-LPAG-60108	596
Big Smoky®	5'0" x 10'0"	U-LP-60120	720	U-LPA-60120	550	U-LPAG-60120	647
Big Smoky®	5'0" x 11'0"	U-LP-60132	800	U-LPA-60132	608	U-LPAG-60132	720
Big Smoky®	5'0" x 12'0"	U-LP-60144	860	U-LPA-60144	655	U-LPAG-60144	774
Big Smoky®	5'6" x 6'0"	U-LP-6672	500	U-LPA-6672	380	U-LPAG-6672	455
Big Smoky®	5'6" x 7'0"	U-LP-6684	570	U-LPA-6684	435	U-LPAG-6684	531
Big Smoky®	5'6" x 8'0"	U-LP-6696	640	U-LPA-6696	487	U-LPAG-6696	583
Big Smoky®	5'6" x 9'0"	U-LP-66108	730	U-LPA-66108	555	U-LPAG-66108	655
Big Smoky®	5'6" x 10'0"	U-LP-66120	800	U-LPA-66120	610	U-LPAG-66120	712
Big Smoky®	5'6" x 11'0"	U-LP-66132	870	U-LPA-66132	662	U-LPAG-66132	792
Big Smoky®	5'6" x 12'0"	U-LP-66144	940	U-LPA-66144	715	U-LPAG-66144	847
Big Smoky®	6'0" x 6'0"	U-LP-7272	540	U-LPA-7272	411	U-LPAG-7272	496
Big Smoky®	6'0" x 7'0"	U-LP-7284	620	U-LPA-7284	472	U-LPAG-7284	579
Big Smoky®	6'0" x 8'0"	U-LP-7296	720	U-LPA-7296	548	U-LPAG-7296	636
Big Smoky®	6'0" x 9'0"	U-LP-72108	790	U-LPA-72108	601	U-LPAG-72108	715
Big Smoky®	6'0" x 10'0"	U-LP-72120	860	U-LPA-72120	654	U-LPAG-72120	776
Big Smoky®	6'0" x 11'0"	U-LP-72132	940	U-LPA-72132	715	U-LPAG-72132	863
Big Smoky®	6'0" x 12'0"	U-LP-72144	1010	U-LPA-72144	768	U-LPAG-72144	910

U-LP Acoustical: STC-40 and STC-45

■ Low Profile- 4'0", 5'0", 5'6" & 6'0" Clear Opening Width



Standard Sizes and Model Number

Acoustical (ULP STC-40 & STC-45) Galvanized Steel
(Second dimension is for length on hinge side.)

• Dual Benefit

STC-40 and STC-45 vents provide the dual benefit of fire safety and protection from noise penetration through the roof assembly.

• Typical Applications

Used over auditoriums and stage areas, near airports or where outside noise may affect the environment inside the building.

• Open Against Snow or Wind

Covers are constructed with sufficient torsion spring operators to open against a minimum 10 psf snow or wind load.

• No Over-Travel

Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over travel.

• No Accidental Opening

Covers will not open when subjected to minimum uplift pressure of 30 psf, preventing accidental opening.

• Fire Safety

Covers automatically spring open in the event of fire and automatically lock in fully open position.

• Easy Reset

Covers latch automatically and manual release mechanism resets automatically by closing covers.

• UL/ FM Tested

Models are approved by Factory Mutual Research Corporation.

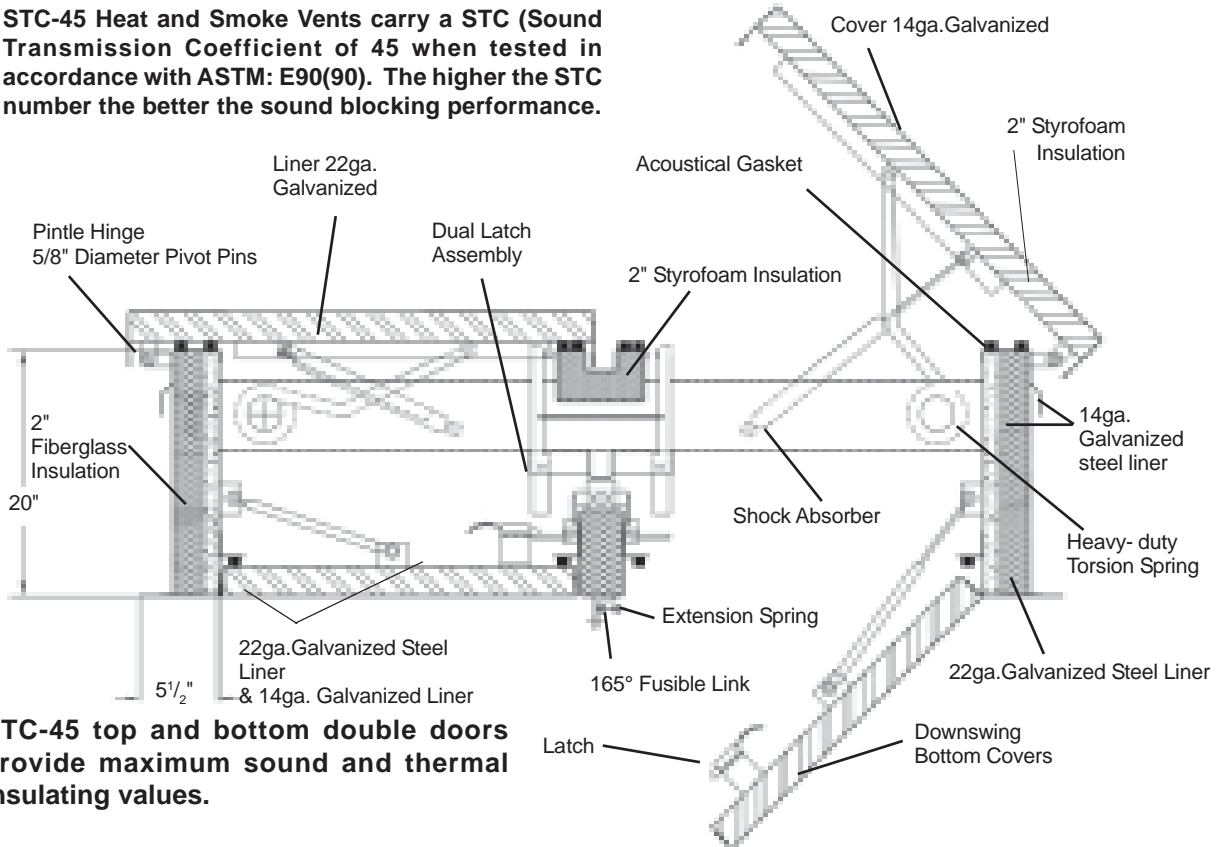
• Materials

Galvanized Steel (FM Approved)

Clear Opening Size	STC-40		STC-45	
	Model No.	Lbs.	Model No.	Lbs.
4'0" x 4'0"	U-LP STC-40-4848	910	U-LP STC-45-4848	955
4'0" x 5'0"	U-LP STC-40-4860	935	U-LP STC-45-4860	980
4'0" x 6'0"	U-LP STC-40-4872	960	U-LP STC-45-4872	1005
4'0" x 7'0"	U-LP STC-40-4884	990	U-LP STC-45-4884	1040
4'0" x 8'0"	U-LP STC-40-4896	1040	U-LP STC-45-4896	1095
5'0" x 6'0"	U-LP STC-40-6072	1030	U-LP STC-45-6072	1080
5'0" x 7'0"	U-LP STC-40-6084	1100	U-LP STC-45-6084	1155
5'0" x 8'0"	U-LP STC-40-6096	1185	U-LP STC-45-6096	1245
5'0" x 9'0"	U-LP STC-40-60108	1255	U-LP STC-45-60108	1320
5'0" x 10'0"	U-LP STC-40-60120	1400	U-LP STC-45-60120	1470
5'0" x 11'0"	U-LP STC-40-60132	1530	U-LP STC-45-60132	1605
5'0" x 12'0"	U-LP STC-40-60144	1662	U-LP STC-45-60144	1745
5'6" x 6'0"	U-LP STC-40-6672	1050	U-LP STC-45-6672	1100
5'6" x 7'0"	U-LP STC-40-6684	1130	U-LP STC-45-6684	1185
5'6" x 8'0"	U-LP STC-40-6696	1250	U-LP STC-45-6696	1310
5'6" x 9'0"	U-LP STC-40-66108	1380	U-LP STC-45-66108	1450
5'6" x 10'0"	U-LP STC-40-66120	1530	U-LP STC-45-66120	1605
5'6" x 11'0"	U-LP STC-40-66132	1675	U-LP STC-45-66132	1750
5'6" x 12'0"	U-LP STC-40-66144	1830	U-LP STC-45-66144	1920
6'0" x 6'0"	U-LP STC-40-7272	1100	U-LP STC-45-7272	1155
6'0" x 7'0"	U-LP STC-40-7284	1210	U-LP STC-45-7284	1270
6'0" x 8'0"	U-LP STC-40-7296	1330	U-LP STC-45-7296	1395
6'0" x 9'0"	U-LP STC-40-72108	1500	U-LP STC-45-72108	1575
6'0" x 10'0"	U-LP STC-40-72120	1682	U-LP STC-45-72120	1756
6'0" x 11'0"	U-LP STC-40-72132	1830	U-LP STC-45-72132	1920
6'0" x 12'0"	U-LP STC-40-72144	1995	U-LP STC-45-72144	2095

STC- 45

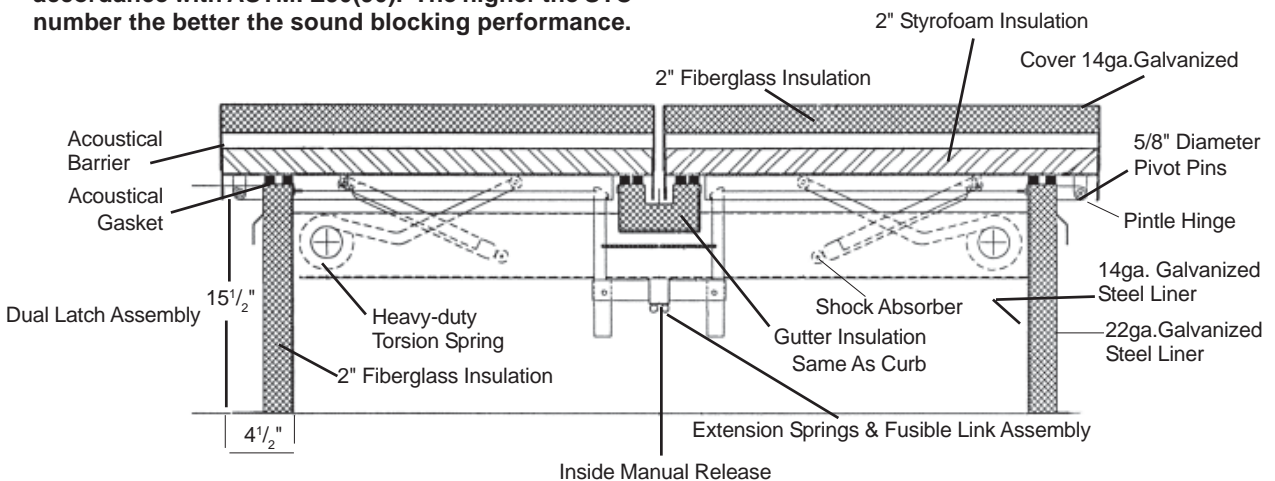
STC-45 Heat and Smoke Vents carry a STC (Sound Transmission Coefficient of 45 when tested in accordance with ASTM: E90(90). The higher the STC number the better the sound blocking performance.



STC-45 top and bottom double doors provide maximum sound and thermal insulating values.

STC- 40

STC-40 Heat and Smoke Vents carry a STC (Sound Transmission Coefficient of 40 when tested in accordance with ASTM: E90(90). The higher the STC number the better the sound blocking performance.



UL-SKY Low Profile Smoke Vents

■ **Low Profile**

4'0", 4'6", 5'0", 5'6" & 6'0"
Clear Opening Width



• **Vent for Heat and Smoke**

In the event of fire, covers automatically spring open to approximately 90 degrees when fusible link melts and automatically lock in fully open position.

• **Provides Interior Light**

Sturdy polycarbonate covers admit light to areas beneath the roof. A variety of shading options are available.

• **Withstand High Impact**

Testing proved their ability to withstand 400ft/lb of impact without puncturing or cracking the panels.

• **UV Stable**

Sturdy cover panels allow light to areas beneath the roof and provide long term resistance to ultraviolet light.

• **Open Against Snow or Wind**

Covers are manufactured with ample torsion spring operators to open against a minimum 10 psf snow or wind load.

• **No Over-Travel**

Units are equipped with hydraulic shock absorbers to control opening speed and prevent over-travel.

• **No Accidental Opening**

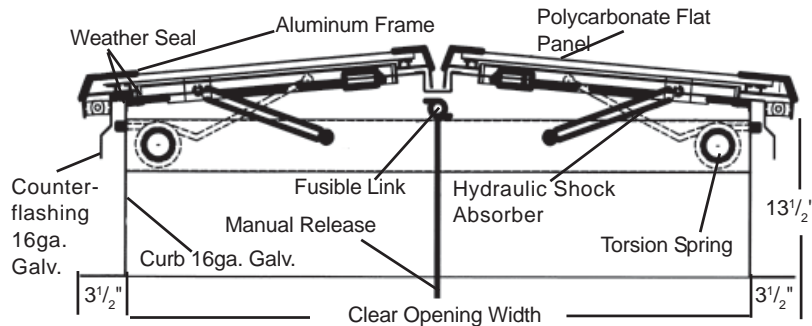
Covers will not open when subjected to a minimum uplift pressure of 30 psf, preventing accidental opening.

• **Easy Reset**

Covers latch automatically and manual release mechanism resets automatically by closing covers.

• **Choices Available**

Available with aluminum or galvanized curb in widths from 4' to 6' and lengths from 4' to 8'.



Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

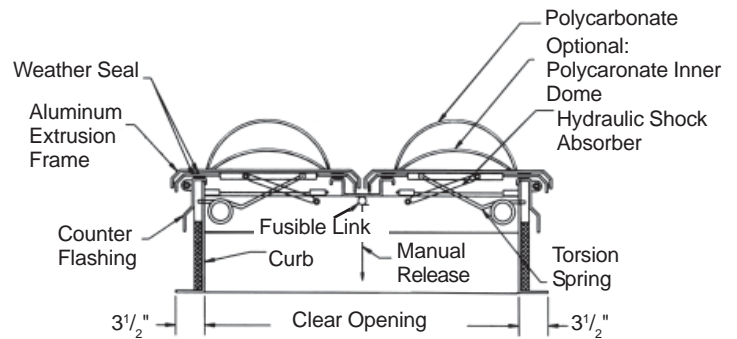
Clear Opening Size	Galvanized Steel Curb		Aluminum	
	Model No.	Lbs.	Model No.	Lbs.
4'0" x 4'0"	UL-SKY-4848	284	UL-SKYA-4848	202
4'0" x 5'0"	UL-SKY-4860	337	UL-SKYA-4860	240
4'0" x 6'0"	UL-SKY-4872	390	UL-SKYA-4872	278
4'0" x 7'0"	UL-SKY-4884	443	UL-SKYA-4884	316
4'0" x 8'0"	UL-SKY-4896	496	UL-SKYA-4896	354
4'6" x 4'0"	UL-SKY-5448	311	UL-SKYA-5448	221
4'6" x 5'0"	UL-SKY-5460	364	UL-SKYA-5460	259
4'6" x 6'0"	UL-SKY-5472	417	UL-SKYA-5472	297
4'6" x 7'0"	UL-SKY-5484	470	UL-SKYA-5484	335
4'6" x 8'0"	UL-SKY-5496	523	UL-SKYA-5496	373
5'0" x 4'0"	UL-SKY-6048	337	UL-SKYA-6048	240
5'0" x 5'0"	UL-SKY-6060	390	UL-SKYA-6060	278
5'0" x 6'0"	UL-SKY-6072	443	UL-SKYA-6072	316
5'0" x 7'0"	UL-SKY-6084	496	UL-SKYA-6084	354
5'0" x 8'0"	UL-SKY-6096	549	UL-SKYA-6096	391
5'6" x 4'0"	UL-SKY-6648	364	UL-SKYA-6648	259
5'6" x 5'0"	UL-SKY-6660	417	UL-SKYA-6660	297
5'6" x 6'0"	UL-SKY-6672	470	UL-SKYA-6672	335
5'6" x 7'0"	UL-SKY-6684	523	UL-SKYA-6684	373
5'6" x 8'0"	UL-SKY-6696	576	UL-SKYA-6696	410
6'0" x 4'0"	UL-SKY-7248	390	UL-SKYA-7248	278
6'0" x 5'0"	UL-SKY-7260	443	UL-SKYA-7260	316
6'0" x 6'0"	UL-SKY-7272	496	UL-SKYA-7272	354
6'0" x 7'0"	UL-SKY-7284	549	UL-SKYA-7284	391
6'0" x 8'0"	UL-SKY-7296	602	UL-SKYA-7296	429

UL-SEE Domed Smoke Vents

- **Low Profile**
4'0", 4'6", 5'0", 5'6" & 6'0"
Clear Opening Width



- **Vent for Heat and Smoke**
UL-SEE Dome-shaped vents open instantly in the event of a fire and automatically lock in fully open position.
- **Interior Light Source**
Sturdy polycarbonate domes allow light to areas beneath the roof and provide long term resistance to ultraviolet light. A variety of shading options are available.
- **Design Deters Condensation**
Air barrier between both inner and outer domes, deters the risk of interior condensation.
- **Reduced Impact**
Sloped dome profile provides reduced impact of snow loads and provides water run-off.
- **Open Against Snow or Wind**
Covers are manufactured with ample torsion spring operators to open against a minimum 10 psf snow or wind load.
- **No Over-Travel**
Units are equipped with hydraulic shock absorbers to control opening speed and prevent over-travel.
- **No Accidental Opening**
Covers will not open when subjected to a minimum uplift pressure of 30 psf, preventing accidental opening.
- **Easy Release**
Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly.
- **Easy Reset**
Covers latch automatically and manual release mechanism resets automatically by closing covers.
- **UL/ FM Tested**
Milcor UL-SEE automatically operating heat and smoke vents are tested and listed by Underwriter's Laboratories, Inc. and Factory Mutual Research Corporation.



Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Clear Opening Size	Galvanized Steel Curb		Aluminum	
	Model No.	Lbs.	Model No.	Lbs.
4'0" x 4'0"	UL-SEE-4848	240	UL-SEEA-4848	240
4'0" x 5'0"	UL-SEE-4860	285	UL-SEEA-4860	285
4'0" x 6'0"	UL-SEE-4872	330	UL-SEEA-4872	330
4'0" x 7'0"	UL-SEE-4884	370	UL-SEEA-4884	370
4'0" x 8'0"	UL-SEE-4896	420	UL-SEEA-4896	420
4'6" x 4'0"	UL-SEE-5448	265	UL-SEEA-5448	265
4'6" x 5'0"	UL-SEE-5460	320	UL-SEEA-5460	320
4'6" x 6'0"	UL-SEE-5472	355	UL-SEEA-5472	355
4'6" x 7'0"	UL-SEE-5484	430	UL-SEEA-5484	430
4'6" x 8'0"	UL-SEE-5496	480	UL-SEEA-5496	480
5'0" x 4'0"	UL-SEE-6048	300	UL-SEEA-6048	300
5'0" x 5'0"	UL-SEE-6060	355	UL-SEEA-6060	355
5'0" x 6'0"	UL-SEE-6072	400	UL-SEEA-6072	400
5'0" x 7'0"	UL-SEE-6084	455	UL-SEEA-6084	455
5'0" x 8'0"	UL-SEE-6096	520	UL-SEEA-6096	520
5'6" x 4'0"	UL-SEE-6648	335	UL-SEEA-6648	335
5'6" x 5'0"	UL-SEE-6660	390	UL-SEEA-6660	390
5'6" x 6'0"	UL-SEE-6672	440	UL-SEEA-6672	440
5'6" x 7'0"	UL-SEE-6684	500	UL-SEEA-6684	500
5'6" x 8'0"	UL-SEE-6696	565	UL-SEEA-6696	565
6'0" x 4'0"	UL-SEE-7248	370	UL-SEEA-7248	370
6'0" x 5'0"	UL-SEE-7260	425	UL-SEEA-7260	425
6'0" x 6'0"	UL-SEE-7272	475	UL-SEEA-7272	475
6'0" x 7'0"	UL-SEE-7284	545	UL-SEEA-7284	545
6'0" x 8'0"	UL-SEE-7296	630	UL-SEEA-7296	630

Big Smoky® Heat & Smoke Vent

Guide Specification

Milcor models: U-LP, U-LPA, or U-LPAG automatically operating heat and smoke vents are listed by Underwriters Laboratories, Inc. and Factory Mutual Research Corporation. Sizes are as indicated on page 13.

Frame

Welded 13-1/2" height, (16-gauge galvanized steel (U-LP and U-LPAG), or .090 aluminum (U-LPA) curb complete with 3-1/2" pre-drilled mounting flanges and same gauge counterflashing, and 1" thick exterior fiberboard insulation.

Covers

High-strength composite construction with exterior cover and liner 22-gauge galvanized steel (U-LP), or .063 aluminum (U-LPA and U-LPAG), bonded to a 2" core of rigid foam-type insulation complying with the requirements of Class "A" Burning brand test (UL-790) and providing a minimum thermal transmittance value of $U = 0.093$ to deter condensation and reduce heat loss.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, being actuated by the parting of a single UL-listed and FM approved 165°F fusible link, automatically locking in the fully open position.
- Covers are of double-leaf construction, with each leaf equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to a 30 psf uplift pressure.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly.
- Covers latch automatically and manual release mechanism resets automatically by closing covers.

NOTE:

1. 14-gauge frame and cover available on special order for all sizes and styles of Big Smoky® and Low Profile Units.
2. Call Milcor for information on other available options, such as painting, electro-thermal links, winches, other fusible link temperatures, metal roof applications, etc.

Low Profile Heat & Smoke Vent

Guide Specification

Milcor models: U-LP, U-LPA, or U-LPAG automatically operating heat and smoke vents are listed by Underwriters Laboratories, Inc. and Factory Mutual Research Corporation. Sizes are as indicated on page 13.

Frame

Welded 13-1/2" height, (16-gauge galvanized steel (U-LP and U-LPAG), or .090 aluminum (U-LPA) curb complete with 3-1/2" pre-drilled mounting flanges and same gauge counterflashing, and 1" thick exterior fiberboard insulation.

Covers

High-strength composite construction with exterior cover and liner 22-gauge galvanized steel (U-LP), or .063 aluminum (U-LPA and U-LPAG), bonded to a 1" core of rigid foam-type insulation complying with the requirements of Class "A" Burning brand test (UL-790) and providing a minimum thermal transmittance value of $U = 0.173$ to deter condensation and reduce heat loss.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, being actuated by the parting of a single UL-listed and FM approved 165°F fusible link, automatically locking in the fully open position.
- Covers are of double-leaf construction, with each leaf equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to a 30 psf uplift pressure.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly.
- Covers latch automatically and manual release mechanism resets automatically by closing covers.

STC-40 Acoustical Heat & Smoke Vent

Guide Specification

Milcor Acoustical ULP-STC-40 automatically operating heat and smoke vents carry a STC-40 acoustical rating and are listed by Factory Mutual Research Corporation. Sizes are as indicated on pages 14 and 15.

Frame

Welded 15-1/2" height, 14-gauge galvanized steel curb complete with 3-1/2" pre-drilled mounting flanges, same gauge counterflashing and 2" thick fiberglass acoustical insulation protected by a 22-gauge galvanized steel liner.

Covers

14-gauge galvanized exterior and 22-gauge galvanized interior liners divide acoustical insulation consisting of 2" fiberglass insulation, 1" dead air space and 2" rigid foam insulation with a 1/8" acoustical barrier. Acoustical gasket between cover and frame.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, actuated by the parting of a single UL-listed 165°F fusible link, and automatically lock fully open.
- Covers are of double-leaf construction, with each leaf equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to uplift pressure up to 30 psf.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly. Manual release available on standard units only. Eliminated on vents with optional special releases. Consult Milcor Customer Service for special unit requirements.
- Covers latch automatically and manual release mechanism resets automatically by closing covers.

STC-45 Acoustical Heat & Smoke Vent

Guide Specification

Milcor Acoustical ULP-STC-45 automatically operating heat and smoke vents carry a STC-45 acoustical rating and are Factory Mutual approved. Sizes are as indicated on pages 14 and 15.

Frame

Welded 20" height, 14-gauge galvanized steel curb complete with 5-1/2" pre-drilled mounting flanges and same gauge counterflashing. A layer of 1" sheetrock and 2" fiberglass insulation is fully covered and protected by a 22-gauge galvanized steel liner to provide excellent sound deadening.

Covers

Upper covers are 14-gauge galvanized steel. Acoustical insulation on upper covers is rigid foam 2" in thickness fully bonded and protected by a 22-gauge galvanized steel cover liner. Lower covers are continuously hinged and are 14-gauge galvanized steel. Acoustical insulation in the lower covers is fully covered and protected by a 22-gauge galvanized liner.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, actuated by the parting of a single UL-listed 165°F fusible link, and automatically lock in fully open position.
- Upper covers are of double-leaf construction, equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load. Lower covers release and swing down when link is broken.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to uplift pressure up to 30 psf.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly. Manual release available on standard units only. May require deletion on vents with optional special releases or winches.
- Covers latch automatically and manual release mechanism resets automatically by closing covers. Bottom covers must be manually latched.

UL-SKY Flat Panel Skylight Heat and Smoke Vent

Guide Specification

Milcor UL-SKY automatically operating heat and smoke vents. Sizes are as indicated on page 16.

Frame

Welded 13-1/2" height, 16-gauge galvanized steel (UL-SKY), or .090 aluminum (UL-SKYA) curb complete with 3-1/2" pre-drilled mounting flanges and same gauge counterflashing, and 1" thick exterior insulation.

Covers

Damage resistant, light admitting, polycarbonate panels surrounded by an extruded aluminum frame. Consult Milcor for tint options that are available.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, actuated by the parting of a single UL-listed 165°F fusible link, and automatically lock fully open.
- Covers are of double-leaf construction, with each leaf equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load.
- Testing proves covers will support 400 ft/lb of impact.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to uplift pressure up to 30 psf.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly.
- Covers latch automatically and manual release mechanism resets automatically by closing covers.

UL-SEE Domed Skylight Heat & Smoke Vent

Guide Specification

Milcor UL-SEE automatically operating heat and smoke vents are listed by Underwriters Laboratories, Inc. and Factory Mutual Research Corporation. Sizes are as indicated on page 17.

Frame

Welded 13-1/2" height, 16-gauge galvanized steel (UL-SEE), or .090 aluminum (UL-SEEA) curb complete with 3-1/2" pre-drilled mounting flanges and same gauge counterflashing, and 1" thick exterior insulation.

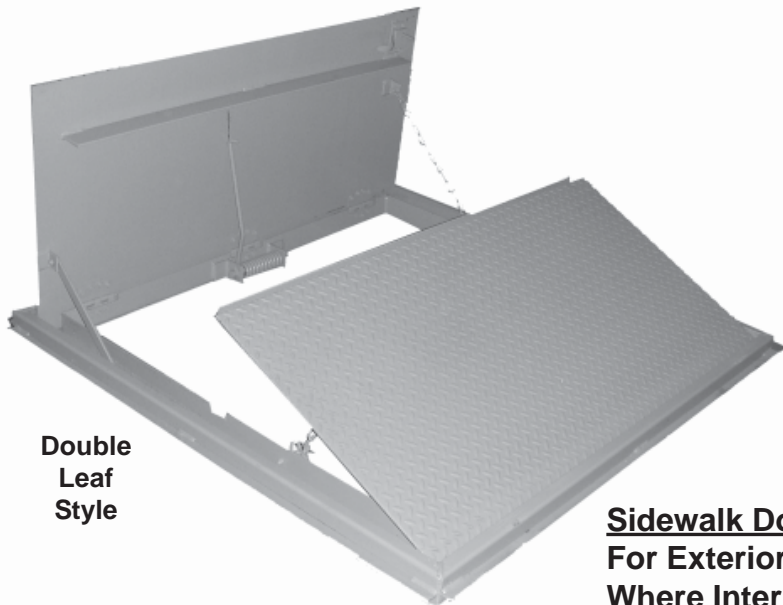
Covers

Damage resistant, light admitting, polycarbonate outer dome with 1/8" polycarbonate inner dome, surrounded by an extruded aluminum frame. Consult Milcor for tint options that are available.

Operation

- Covers automatically spring open to approximately 90 degrees in the event of fire, actuated by the parting of a single UL-listed 165°F fusible link, and automatically lock fully open.
- Covers are of double-leaf construction, with each leaf equipped with sufficient torsion spring operators to open against a 10 psf snow or wind load.
- Units are equipped with hydraulic shock absorbers to control cover opening speed and prevent over-travel.
- Covers will not open when subjected to uplift pressure up to 30 psf.
- Vent design allows covers to be released manually from inside or outside without disturbing the fusible link assembly.
- Covers latch automatically and manual release mechanism resets automatically by closing covers.

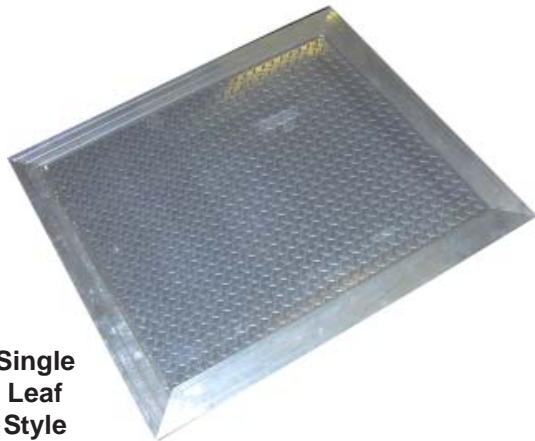
Milcor Floor & Sidewalk Doors Are Built To Be Dependable and Long-Lasting



Double Leaf Style

Sidewalk Doors

For Exterior Access Applications or Where Interior Moisture Conditions Require Drainage Provisions.



Single Leaf Style

Floor Doors

For Interior Access To Valves, Electrical or Computer Wiring, or For Access To Upper or Lower Floor Levels.

Overall Product Features

Heavy-Duty Construction to Meet Required Loads

Solid framing and anchoring designs and options in both aluminum or steel construction can handle demanding applications for foot or vehicle traffic safely.

Stainless Steel Hardware

For installation in highly corrosive environments, roof hatches are available with stainless steel hardware.

Locking and Latching Doors

Where additional security is needed, floor and sidewalk doors are available with mortise cylinder locks and recessed padlock hasps. Contact the factory for other lock and latching options.

Special Wheel Loading

GA and GD style sidewalk doors are available with H-10 and H-20 wheel loading. They are designed for off-street use where not subjected to high volume traffic.

Non-Security: Aluminum Floor Doors

- **Low Cost Floor Access**

Milcor's F, T and Z Series Non-Security Type Aluminum Floor Doors provide low cost access where access to equipment or services located under floors is required.

- **Easy Accessibility**

Equipped with lift ring access for environments where an unlocked design is acceptable.

- **Powerful Load Capacity.**

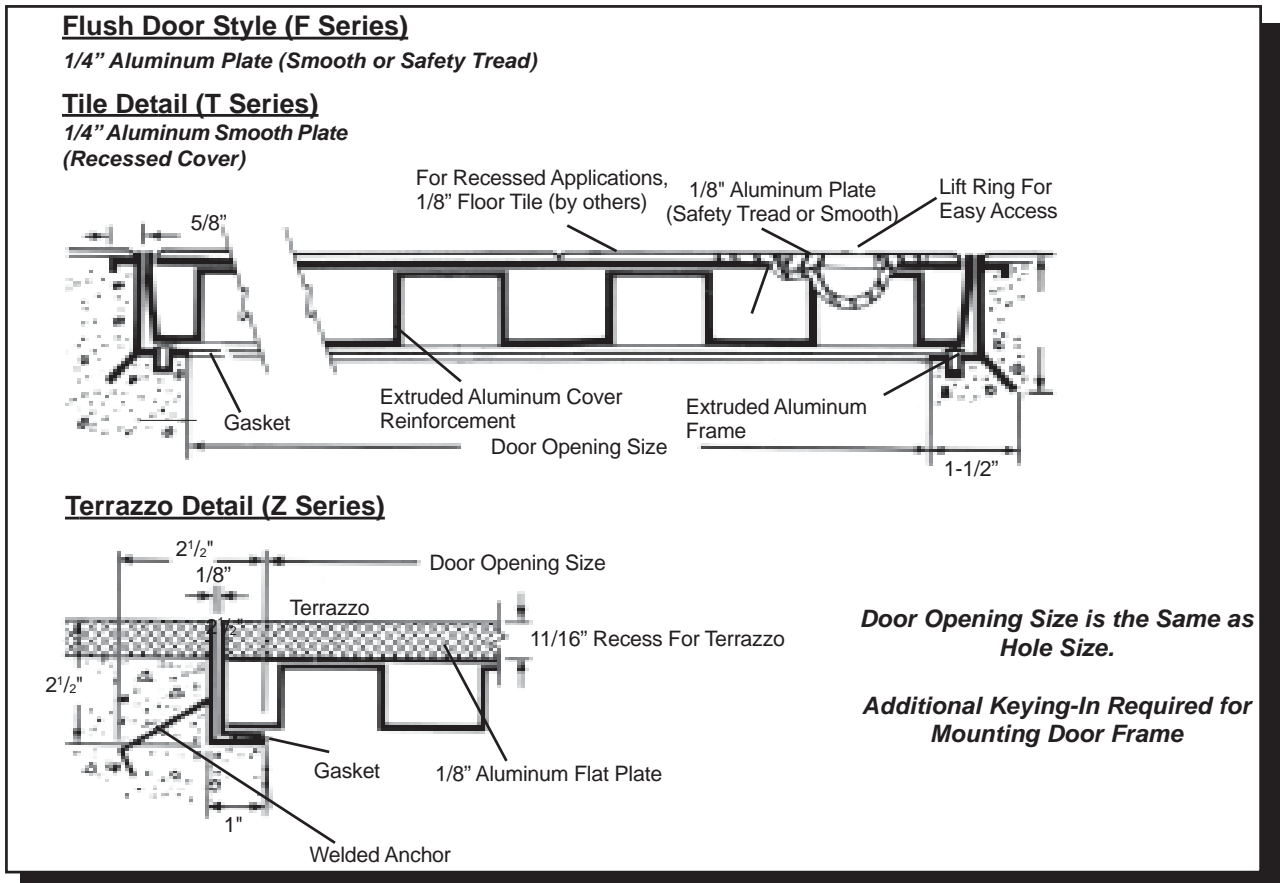
Designed to support a uniformly distributed load of 200 psf on a 40" span to 1,000 psf on a 2'0" span.

- **Low Maintenance**

Milcor Aluminum Floor Doors provide low maintenance of all-aluminum welded.

- **Styles**

Milcor Aluminum Floor Doors provide low maintenance of all-aluminum welded construction.



Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Dimensions	Flush Cover		Tile Cover		Terrazzo Cover	
	Model No.	Lbs.	Model No.	Lbs.	Model No.	Lbs.
2'0" x 2'0"	F-62	30	T-62	30	Z-62	40
2'6" x 2'6"	F-64	35	T-64	35	Z-64	45
3'0" x 2'6"	F-66	40	T-66	40	Z-66	50
3'0" x 3'0"	F-68	45	T-68	45	Z-68	55

Security: Aluminum Floor Doors

- **Low Maintenance**

Milcor Aluminum Floor Doors provide low maintenance with all-aluminum welded construction.

- **Concrete Anchors**

Strap-type concrete anchors fix doors firmly into concrete floors.

- **Removable Handles**

Security snap latches with removable top handles prevent undesired access.

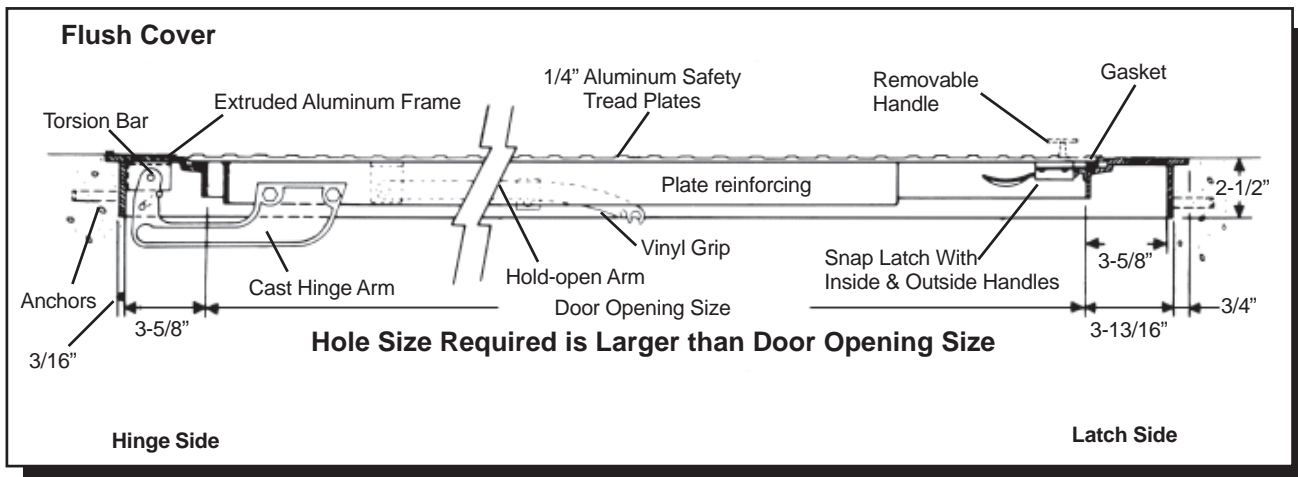
- **Powerful Load Capacity.**

Milcor Security models F or T are designed to support a uniformly distributed load of 150 psf.

- **Two Cover Styles Available**

Flush Cover: Flush with the exposed surface of the frame and suitably reinforced to carry the designed loads.

Tile Cover: 1/4 inch recessed smooth cover with extruded tile stop for installation of floor tile in cover.



Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Door Opening Size Per Table

(Custom sizes are available.)

No. of Leafs	(Door Opening Size) Dimensions	Flush Cover		Tile Cover	
		Model No.	Lbs.	Model No.	Lbs.
Single-Leaf	2'0" x 2'0"	F-2424	60	T-2424	66
	2'6" x 2'6"	F-3030	75	T-3030	85
	3'0" x 2'6"	F-3630	85	T-3630	95
	3'0" x 3'0"	F-3636	95	T-3636	106
Double-Leaf	4'0" x 4'0"	F-4848	160	T-4848	180
	4'0" x 6'0"	F-4872	220	T-4872	246
	5'0" x 5'0"	F-6060	230	T-6060	258

Flush Cover Cover: Security - Steel or Aluminum/ Steel

- **No Obstruction**

Flush cover styles are finished out flush with the concrete surface to present no obstruction or hazard to floor traffic.

- **Non-Skid Surface**

The patterned 3/16" steel or 1/4" aluminum metal surface cover provides safe, non-skid footing.

- **Supports 150 psf Load**

Standard reinforced construction handles uniform loads of 150 lbs. per sq.ft.

- **Hardware**

Mounted to a zinc-plated, riveted, triple-leaf lift hinges, stop chain and a rigid hold-open arm on each leaf.

- **Superior Cover Mounting**

Cover is mounted to frame with cast steel hinges with torsion springs, complete with automatic locking hold-open arms and automatic snap latch. Fixed inside handle for access, with removable outside handles for security access.

- **Material Options**

Floor doors are available in two materials to meet specific design criteria.

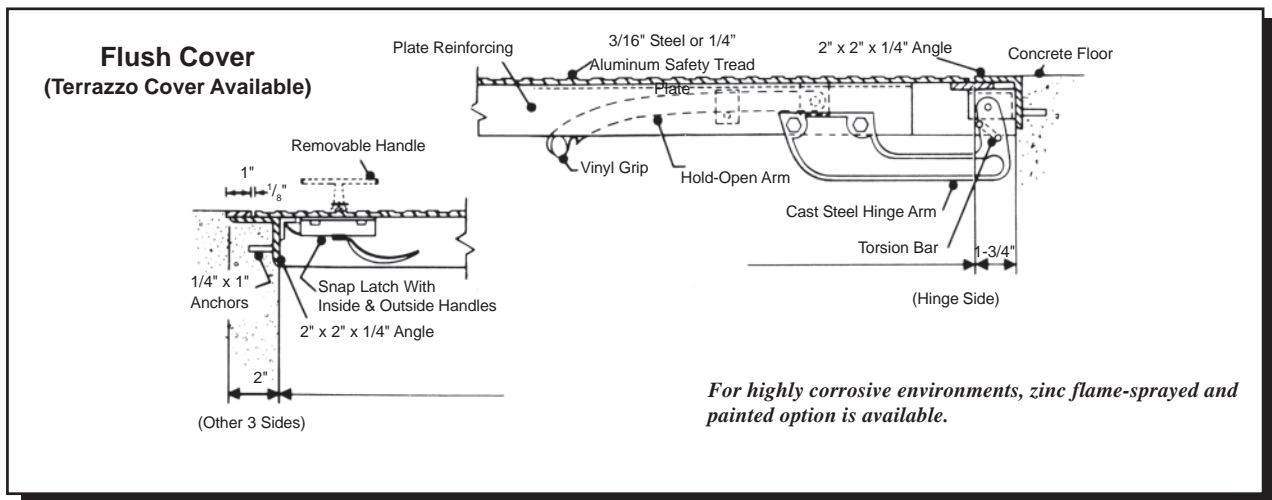
Steel, Prime Painted: FA Series

Aluminum Cover, Steel Frame: FC Series

- **Latch Options**

Single-Leaf Covers equipped with automatic snap latch having fixed inside and removable outside handles.

Double-Leaf Covers are fixed with a throw bolt on the inactive leaf, and a latching mechanism having fixed inside and removable outside handles on the active leaf.



Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Door Opening Size Per Table

(Custom sizes are available.)

No. of Leafs	(Door Opening Size) Dimensions	Steel, Prime Painted		Aluminum Cover/Steel Frame	
		Model No.	Lbs.	Model No.	Lbs.
Single-Leaf	2'0" x 2'0"	FA-1	140	FC-1	120
	2'6" x 2'6"	FA-2	160	FC-2	140
	3'0" x 2'6"	FA-3	175	FC-3	150
	3'0" x 3'0"	FA-4	195	FC-4	160
	3'6" x 3'6"	-	-	FC-5	200
Double-Leaf	3'6" x 3'6"	FA-5	275	-	-
	2'10" x 3'4"	FA-6	240	FC-6	200
	3'4" x 3'10"	FA-7	300	FC-7	250
	3'10" x 3'10"	FA-8	340	FC-8	270
	4'0" x 4'0"	FA-9	350	FC-9	280
	4'0" x 6'0"	FA-10	440	FC-10	300
	5'0" x 5'0"	FA-11	450	FC-11	310

Steel and Aluminum

• Accessibility and Safety

These doors provide a safe covered opening for access to equipment or services located under sidewalks or for passage of personnel and materials from basement areas.

• Versatile Usage

Sidewalk doors are also used as interior doors in areas where drainage is required. Recessed frames serve as continuous drainage gutters to divert water to interior drain outlets.

• Powerful Load Capacity.

Milcor GA and GD Models designed to support a uniformly distributed load of 300 psf. H-20 loading also available for heavier loading capacity requirements.

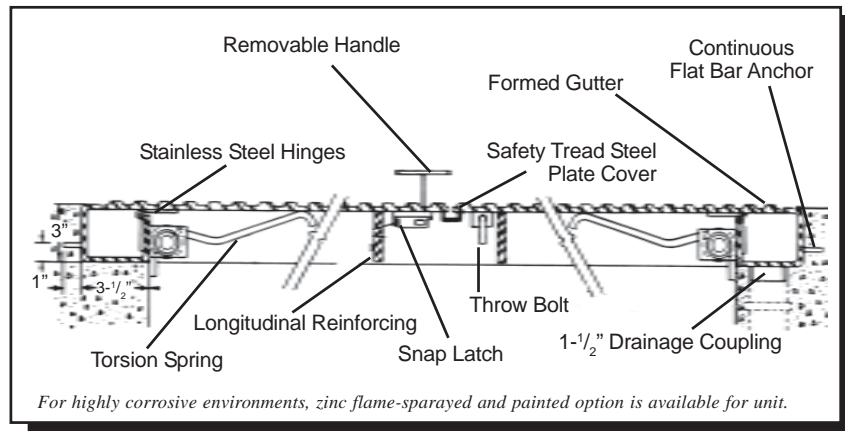
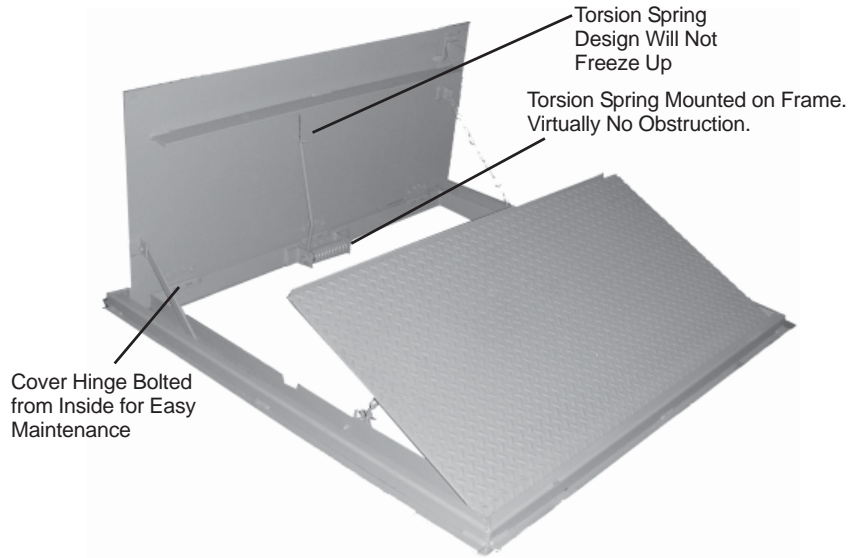
• Non Corrosive Hardware

Mounted to a stainless steel hinges equipped with zinc-plated stop chain and a rigid hold-open arm on each leaf.

• Latch Options

Single-Leaf Covers equipped with automatic snap latch fixed inside and removable outside handles.

Double-Leaf Covers are fixed with a throw bolt on the inactive leaf, and a latching mechanism fixed inside with removable outside handles on the active leaf.



For highly corrosive environments, zinc flame-sprayed and painted option is available for unit.

Standard Sizes and Model Number

(Second dimension is for length on hinge side.)

Door Opening Size Per Table

(Custom sizes are available.)

No. of Leaves	(Door Opening Size) Dimensions	Prime Painted Stl.		Aluminum	
		Model No.	Lbs.	Model No.	Lbs.
Single-Leaf	2'0" x 2'0"	GA-1	170	GD-1*	75
	2'6" x 2'6"	GA-2	220	GD-2*	96
	3'0" x 2'6"	GA-3	257	GD-3	102
	3'0" x 3'0"	GA-4	286	GD-4	113
	3'6" x 3'6"	GA-5	321	GD-5	134
Double-Leaf	2'10" x 3'4"	GA-6	278	GD-6*	129
	3'4" x 3'10"	GA-7	348	GD-7*	150
	3'10" x 3'10"	GA-8	440	GD-8*	188
	4'0" x 4'0"	GA-9	482	GD-9*	198
	4'0" x 6'0"	GA-10	642	GD-10	268
	5'0" x 5'0"	GA-11	706	GD-11	278

*Torsion spring not provided on aluminum sidewalk doors in the following standard and special sizes: single leaf type- 2'0" x 2'0" through 4'6", 2'6" x 2'6", double leaf type- 2'10" x 3'4" through 5'6", 3'10" x 3'10" through 4'0" x 4'0".

Non Security: Aluminum Flush or Tile Cover

Guide Specification

Milcor models F, T and Z non-security floor doors are designed to support a uniformly distributed load from 200 psf on a 40" span to 1,000 psf on a 2'0" span. Sizes are as indicated on page 21.

Frame

Flush Cover (F) and Tile Cover (T) Models: Constructed of extruded aluminum sections with mitered and welded corners, with integral masonry anchors, and with a heavy neoprene cushion provided along the top surface of the cover ledge.

Terrazzo Cover (Z) Models: Constructed of extruded aluminum sections with mitered and welded corners, with welded masonry anchors, and with a heavy neoprene cushion provided along the top surface of the cover ledge.

Covers

Flush Cover (F) Models: 1-1/2" deep extruded aluminum section with a welded 3/16" aluminum top plate having a safety tread pattern surface.

Tile Cover (T) Models: 1-1/2" deep extruded aluminum section with a welded 3/16" aluminum top plate having a flat plate recessed to receive 1/8" floor tile.

Terrazzo Cover (Z) Models: 1-1/2" deep extruded aluminum section with a riveted 3/16" aluminum top plate, all enclosed by extruded aluminum angles, to provide a recess to receive 11/16" deep terrazzo.

Cover Mounting

All Models: Cover rests free in the frame and is provided with a chrome lift ring for easy removal from frame.

Security: Aluminum Flush or Tile Cover

Guide Specification

Milcor models F and T security floor doors are designed to support a uniformly distributed load of 150 psf. Sizes are as indicated on page 22

Frame

Flush Cover (F) & Tile Cover (T) Models: Constructed of extruded aluminum sections with mitered and welded corners. Strap-type concrete anchors are bolted to the frame, and a closed-cell rubber gasket is included on the frame to cushion the cover.

Covers

Flush Cover (F-style) Models:

1/4" aluminum floor plate with a safety tread pattern on the upper surface, mounted completely flush with the exposed surface of the frame and suitably reinforced to carry the designed loads.

Tile Cover (T-style) Models:

1/4" aluminum recessed floor plate reinforced to carry the designed loads. Extruded tile stop provided on the cover and frame to provide a recess to receive (1/8" or 3/16") floor tile.

Cover Mounting

All Models: Cover mounted to the frame with cast steel hinges equipped with torsion bars, complete with an automatic locking hold-open arm, automatic snap latch having fixed inside and removable outside handles.

Flush Cover Floor Door: Security Style Steel or Aluminum/ Steel

Guide Specification

Milcor steel framed security floor door models FA and FC are designed to support a uniformly distributed load of 150 psf. Sizes are as indicated on page 23.

Frame

Models (FA & FC): Constructed of welded 1/4" steel angles with welded concrete anchors and prime painted.

Covers

Models (FA & FC): 3/16" steel (FA) or 1/4" aluminum (FC) floor plate with a safety tread pattern on the upper surface and suitably reinforced.

Cover Mounting

Models (FA & FC): Mounted to the frame with heavy-duty triple-leaf steel hinges equipped with torsion bars and complete with an automatic locking hold-open arm, automatic snap latch having fixed inside and removable outside handles.

Finish

Steel Units: Prime-painted.

Aluminum/ Steel Units: Standard mill finish cover and prime-painted steel frame.

Note: Where required for highly corrosive environments, units can be zinc-flame sprayed coated and prime-painted at an additional cost and 10 week delivery.

Flush Cover Sidewalk Doors Steel or Aluminum

Guide Specification

Milcor models GA or GD doors for sidewalk or floor applications are equipped with drainage gutters designed to support a uniformly distributed load of 300 psf. H-20 loading is also available. Sizes and cover leaf types are as indicated on page 24.

Frame

Constructed of welded, formed 3/16" steel and/or 1/4" extruded aluminum sections, shaped to serve as a continuous drainage gutter around the unit and equipped with a 1-3/8" diameter drainage hole with a 1-1/2" outside diameter drain coupling for outlet into an inside drain. Concrete anchors are provided on the frame.

Covers

1/4" steel or 1/4" aluminum floor plate with a safety tread pattern on the upper surface mounted flush with the frame and reinforced to carry the designed loads.

Torsion Spring

Assisted by a torsion spring operators attached to the frame unless otherwise recommended by the manufacturer.

Cover Mounting

Mounted to the frame on stainless steel hinges and equipped with a zinc-plated stop chain and a rigid hold-open arm on each leaf.

Latch

Single Leaf Covers: Cover is equipped with an automatic snap latch fixed inside and outside handles on the active leaf.

Double Leaf Covers: Cover is equipped with a throw bolt on the inactive leaf, a latching mechanism fixed inside and removable outside handles on the active leaf.

Finish

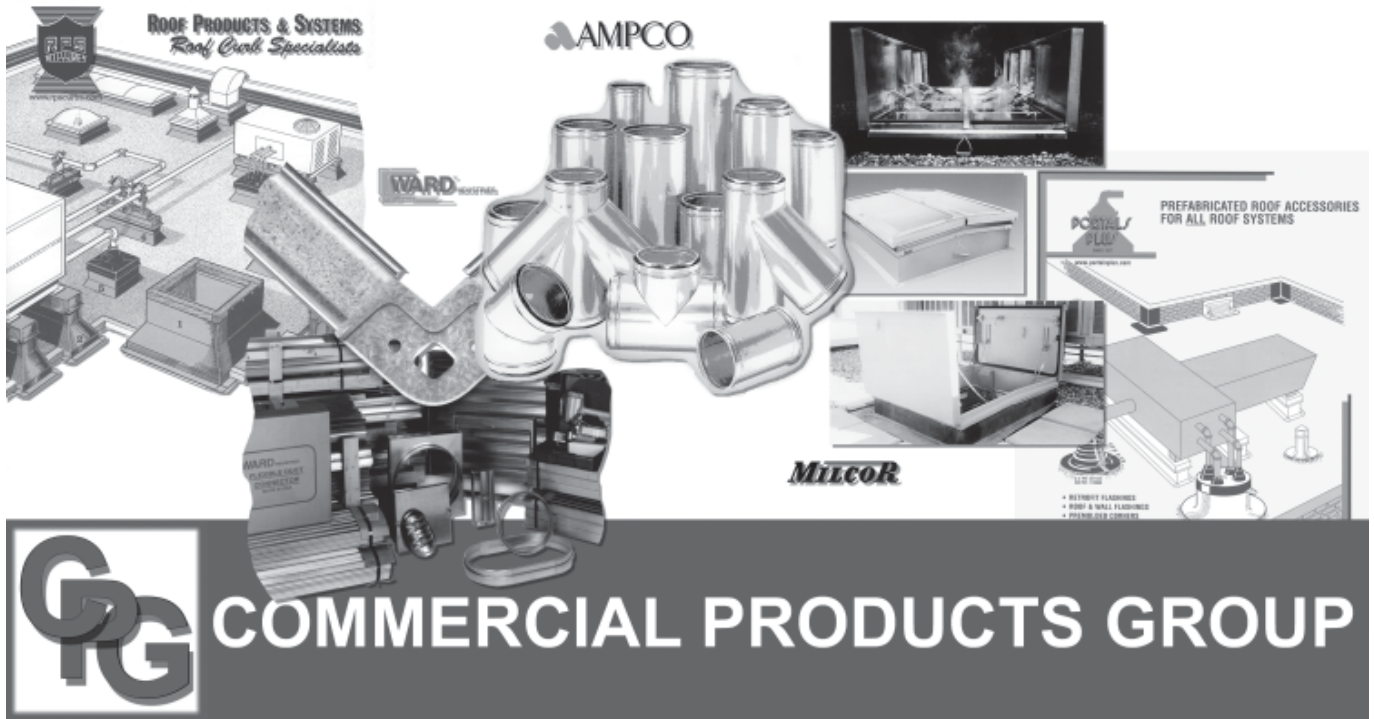
Steel Units: Prime-painted.

Aluminum Units: Standard mill finish.

Note: Where required for highly corrosive environments, units can be zinc-flame sprayed coated and prime-painted at an additional cost and 10 week delivery.

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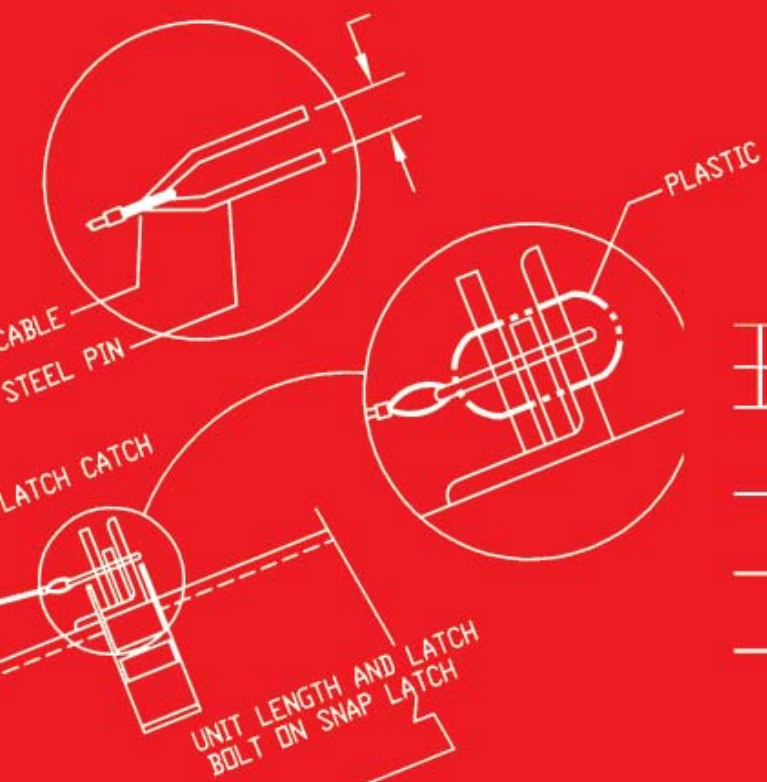
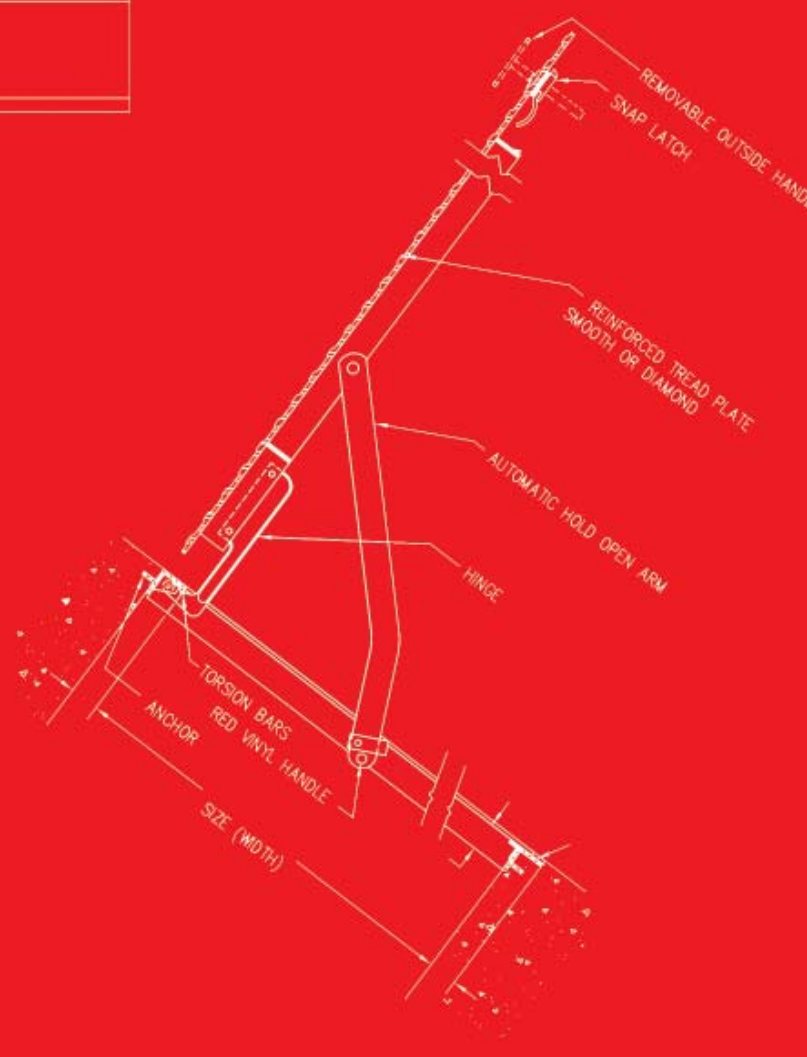
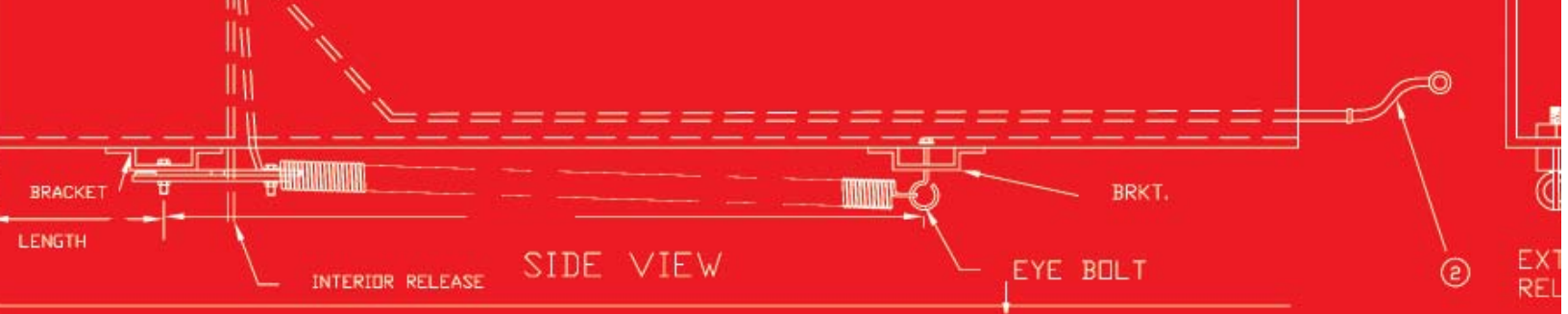
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MILCO	TITLE: DOUBLE LEAF FLOOR DOOR ALUMINUM CONSTRUCTION
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