

Counter Fire Doors

Practical Design Applications (for fire rated walls)

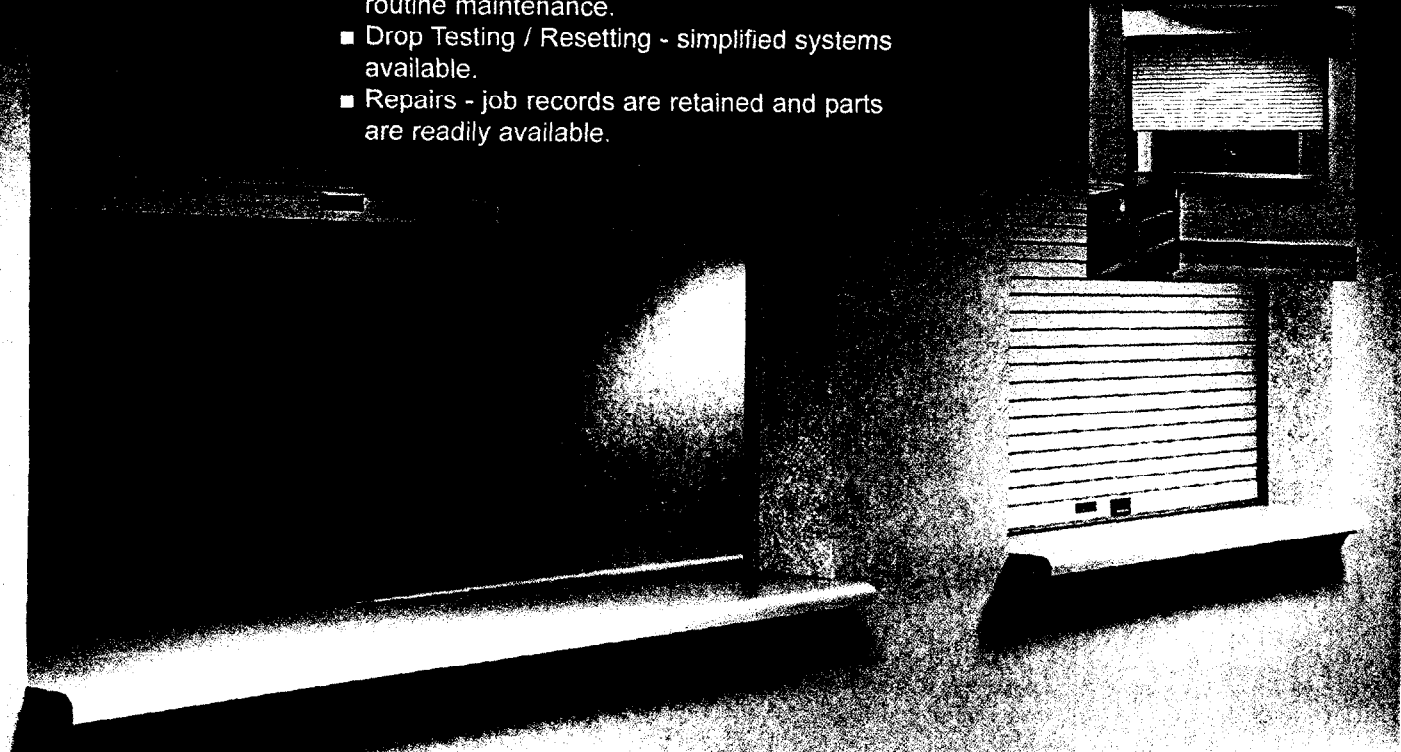
- Service Window Openings
- Cafeterias
- Healthcare Facilities
- Educational Facilities
- Hospitality/Public Space

Benefits

- Q/S Program - Cornell can manufacture and ship most standard counter fire doors in one to two weeks.
- UL Labeled - 3, 1 1/2, 1 and 3/4 hour labels.
- Wall Construction - UL approved for mounting to rated drywall, masonry or steel walls.
- Size Flexibility - each unit is built to exact opening size requirements.
- Compact Storage - curtain stores in an overhead coil that is totally supported by the side guides.
- Durability - commercial duty design, little to no routine maintenance.
- Drop Testing / Resetting - simplified systems available.
- Repairs - job records are retained and parts are readily available.

Available Options

- UL labeled stainless steel or plastic laminate countertops
- Mechanical releasing devices
- Annunciators
- Cylinder or slide bolt locking
- Bottom bar sensing edge for motorized units
- Operator covers for exterior mounted units or exposed operators below 8'-0" high
- Sill angles



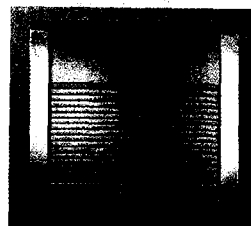
Specialty Counter Fire Doors



SmokeShield®

Adds tested and UL labeled smoke and draft control protection to Rolling Counter Fire Door assemblies. SmokeShield units are tested per UL 1784 and meet building code and NFPA air leakage criteria. These units add protection against the loss of life in addition to property protection from fire. SmokeShield is available on

units up to 12' wide and up to 10' high. They can come to rest on a countertop or run full opening height and stop at the floor.



Counter Fire Doors with Frame and Countertop

These UL 1 1/2 hour labeled manual push-up operated units provide clear openings up to 10'-0" wide and 4'-9" high. They come fully assembled with an integral frame and countertop ready to be built into masonry or rated dry

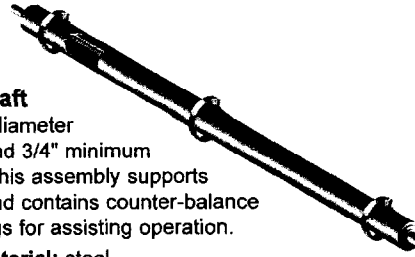
wall openings with wall thickness ranging from 4 1/2" to 12" thick. Frames are assembled and welded with 16 ga. stainless or steel material, sills are 14 ga. stainless material. Stainless steel is 300 series #4 finish, steel frames are factory primed.

Counter Fire Door Components

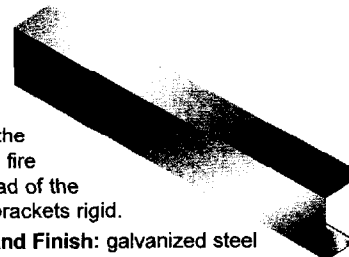


Brackets
Minimum 12 gauge steel plates that bolt to guide assembly and support the counter balance shaft and curtain.
Standard Material & Finish: steel, with SpectraShield® powder coating 30-7192 gray

Counter-balance Shaft
3" minimum diameter outer shaft and 3/4" minimum inner shaft. This assembly supports the curtain and contains counter-balance torsion springs for assisting operation.
Standard Material: steel



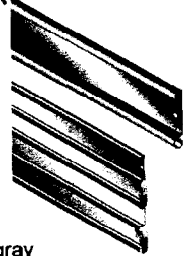
Hood
Protective sheet metal enclosure for the curtain that provides fire resistance at the head of the unit and keeps the brackets rigid.
Standard Material and Finish: galvanized steel with baked-on light gray polyester enamel or stainless steel with #4 finish



Guides
Side rail assemblies that bolt to the wall (maximum 18" bolt spacing as per UL procedure) and support the entire weight of the unit.
Standard Material & Finish: steel with SpectraShield® powder coating 30-7192 gray with galvanized steel curtains or #4 finish stainless steel with stainless steel curtains



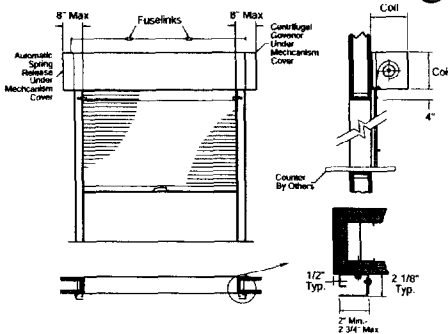
Curtain
Interlocking roll formed flat-faced 1-1/2" high slats with galvanized steel endlocks riveted to ends of alternate slats to maintain curtain alignment and prevent wear.
Standard Material & Finish: 22 gauge galvanized steel with a baked-on light gray polyester enamel or 22 gauge stainless steel with #4 finish



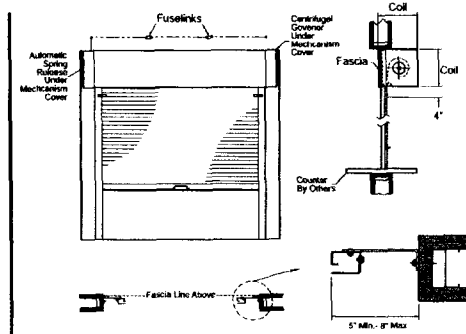
Bottom Bar
Reinforcing member attached to the bottom of the curtain with a vinyl astragal seal to cushion the contact point on the counter. Single angle provided with slide bolt locking (shown), single angle with bent trim piece provided with cylinder locks.
Standard Material & Finish: steel with SpectraShield® powder coating 30-7192 gray with galvanized steel curtain or #4 finish stainless steel with stainless steel curtains

Operation
Push-up operation shown. Hand crank and motors are available. Doors operate by rotating the shaft gear end. The opposite end of shaft applies spring tension and is equipped with a spring adjusting wheel.

Mounting & Clearances



Face of Wall
Maintains clearance of full opening, minimal exposed components.

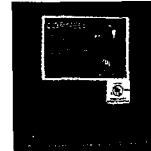


Between Jambs
Mounts within the opening, fascia (front hood closure piece) required.

Counter Fire Doors are built to order to fit openings up to 16' wide, with a maximum of 7'-6" or openings up to 12' wide with a maximum height of 10'.

Special Feature Options

- **UL 1 1/2 Hour Labeled Countertops** - Plastic laminate countertops are available in a range of standard laminates in a single piece up to 10' wide, and in two pieces with center joint to 16' wide. 14 gauge, #4 finish stainless steel countertops are custom designed to a maximum wall opening width of 11'2" for face of wall units, 11'10" for between jambs, for a maximum 12" wall thickness.
- **Release Devices** - are fail-safe electro-mechanical devices that initiate automatic fire door closing in response to an alarm signal or due to a ten second +/- power outage. Battery back-up devices are fail-safe, but can last up to 72 hours without initiating a release due to a power failure.
- **Annunciators** - provide visual and audible advanced warning that a fire door is about to close. They are activated automatically upon an alarm signal or, in some instances, loss of power.



For details on available automatic closing systems, please refer to Cornell's Fire Control Products brochure.

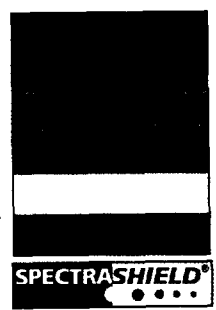


Optional Finishes

- Powder coat finish in selected color
- Zinc Rich Gray corrosion resistant powder coating
- Hot-dip galvanizing on steel components

SpectraShield® Powder Coat Finish

Cornell's SpectraShield® Powder Coat Finish adds durability and aesthetic value to our products in a choice of over 200 colors. Surface preparation and the coating process produces a smooth, long lasting finish at controlled costs.



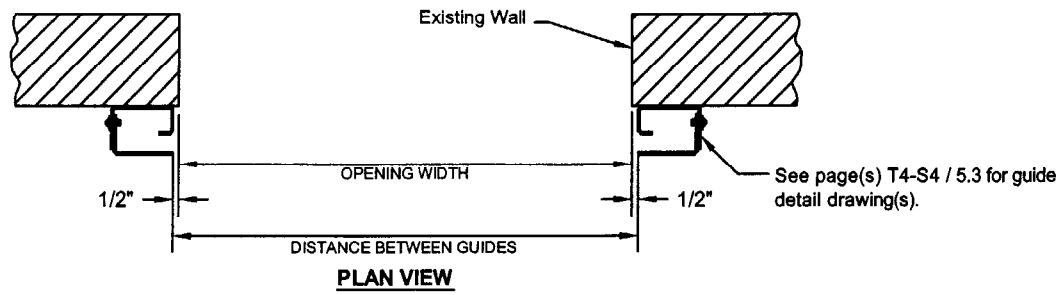
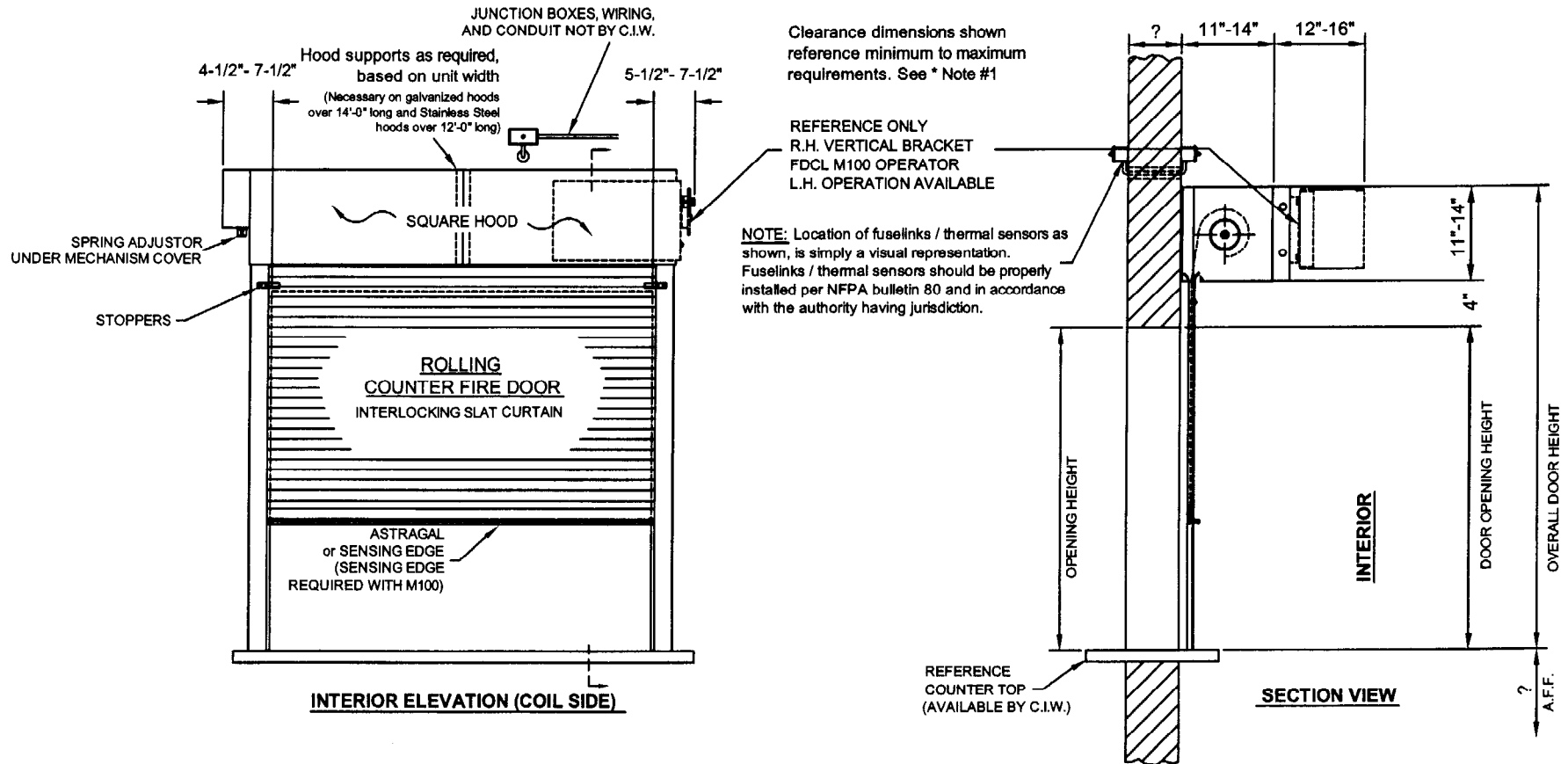
Rolling Door Specialists

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An ISO 9002 Registered Firm

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Mountaintop, PA 18707
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Engineering Design Services: Ext. 551 or 641
Website: www.cornelliron.com
Email: cornell@cornelliron.com

Mounting Reference Detail for Face of Wall Mounted Rolling Counter Fire Doors



- *Notes:
- 1.) These details are to be used for mounting set up reference only! Clearance dimensions will vary based on door size, material, operator selection, operator mounting position, etc.
 - 2.) For specific details configured to door opening size and properties, please log on to our website at www.cornelliron.com and click on the "Specs, Details & Product Info" button, "Counter Fire Doors," then "Drawings" and follow the prompts to generate unit specific details. Or, contact our Engineering Services department at 800.233.8366 ext. 551 or 641.

UL Listing Product Information

Underwriters Laboratories, Inc. (UL) is the leading third-party product safety certification organization in North America. UL evaluates product samples to requirements in areas such as performance, environmental and public health, and electromagnetic compatibility.

The UL Listing Mark is used in connection with products that have been evaluated by UL and found to be in compliance with UL's requirements.

Cornell Fire Doors

Cornell's Fire Door products have been UL approved and are listed under the following UL Product Category and Control Number: **Rolling-Steel Type Fire Doors – GSVV.R**

UL File Number: **R1422**

Ratings: 4 HR, 3 HR, 1-1/2 HR, 1 HR or 3/4 HR

Sizes: Classified for openings up to 13'6"W x 12'H or up to 162 sq. feet in area. Doors 32' W x 25'H, not to exceed 768 sq. feet are eligible for Oversize Labels. For a further description of Oversize Fire Doors, see UL category GSNV.

Certification for Canada: Cornell's Fire Doors UL certified for use in Canada can be found under the UL Product Category "Rolling-Steel Type Fire Doors Certified for Canada", Control Number GSVV7.R1422.

Cornell's Counter Fire Doors

Counter Fire Doors to 12'W x 10'H, with 1-1/2 hr, 1hr or 3/4 hr Labels

Cornell's Counter Fire Doors products of this size have been UL approved and are listed under the following UL Product Category and Control Number: **Service Counter Type Fire Doors – GSWT.R**

UL File Number: **R15854**

Ratings: 1-1/2 HR, 1 HR or 3/4 HR

Certification for Canada: Counter Fire Doors of this size UL certified for use in Canada can be found under the UL Product Category "Service Counter Type Fire Doors Certified for Canada", Control Number GSWT7.R15854

Counter Fire Doors to 12'W x 10'H or 16'W x 7'6"H, with 3 hr, 1-1/2 hr, 1 hr or 3/4 hr Labels

Cornell's Counter Fire Door products of this size have been UL approved and are listed under the following UL Product Category and Control Number: **Rolling-Steel Type Fire Doors – GSVV.R**

UL File Number: **R1422**

Ratings: 3 HR, 1-1/2 HR, 1 HR or 3/4 HR

Sizes: Classified for openings up to 12'W x 10'H. Counter fire doors over 12'W x 10'H up to 16' W x 7'6"H, are eligible for Oversize Labels. For a further description of Oversize doors, see UL category GSNV.

Certification for Canada: Counter Fire Doors of this size UL certified for use in Canada can be found under the UL Product Category "Rolling-Steel Type Fire Doors Certified for Canada", Control Number GSVV7.R1422.

Rolling Door Specialists

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Cornell Counter Fire Doors with Integral Frame and Countertop

Cornell's Counter Fire Door with Integral Frame and Countertop products have been UL approved and are listed under the following UL Product Category and Control Number:

Service Counter Type Fire Doors – GSWT.R

UL File Number: **R15854**

Ratings: 1-1/2 HR, 1 HR or 3/4 HR

Sizes: Classified for openings up to 10'W x 4'9" H.

Certification for Canada: Counter Fire Doors with Frame and Countertop UL certified for use in Canada can be found under the UL Product Category "Service Counter Type Fire Doors Certified for Canada", Control Number GSWT7.R15854.

Cornell SmokeShield® Leakage Rated Door Assemblies

Cornell's SmokeShield® products have been UL approved and are listed under the UL Product Category and Control Number: **Leakage Rated Door Assemblies – OPBW.R**

UL File Number: **R1422** for 3 hour labeled doors, **R15854** for 1-1/2, 1 or 3/4 hour labeled doors.

Ratings: UL Leakage rated door assembly. SmokeShield® doors also carry a 3 HR, 1-1/2 HR, 1 HR or 3/4 HR fire rating.

Sizes: Classified for openings up to 12'W x 10'H.

Cornell Labeled Countertops

Cornell's Labeled Countertops have been UL approved and listed under the following UL Product Category and Control Number: **Miscellaneous Fire Door Accessories – GVUX.R**

UL File Number: **R15865**

Ratings: 1-1/2 HR

Sizes: Plastic Laminate – Single piece countertops up to 10' W, two piece countertops up to 16' W.
Stainless Steel – Single piece countertops up to 11'10" W.

Surface Materials: Plastic laminated or Stainless steel

Certification for Canada: Labeled Countertops UL certified for use in Canada can be found under the UL Product Category "Miscellaneous Fire Door Accessories Certified For Canada", Control Number GVUX7.R.

For more detailed UL information, visit the Underwriter's Laboratory website at www.ul.com

Up Front Vs. Long Term Cost Comparison of Automatic Fire Door Closing Systems

When deciding which automatic fire door closing system is the best choice for any given application, system activation and the additional door servicing costs associated with the various systems must be considered. **Keep in mind that although a more basic (traditional) fire door closing system may be less expensive up front, the additional expense of more frequent professional servicing may, in the long run, far exceed the cost of initially specifying a more advanced system.**

Although servicing costs vary by area of the country, an approximate fee for hiring professional door technicians to reset a fire door that has mechanically closed is \$100.00 per hour for labor, plus the cost of any needed replacement parts.

With traditional automatic fire door closing systems, additional professional servicing costs will be incurred whenever circumstances cause a fire door to mechanically close. At the very least, traditional automatic closing systems will be signaled to close for annual testing or due to high temperatures near the door that cause the fusible links to melt. But in most instances, fire doors are connected to some type of alarm system that will activate automatic closing whenever the alarm system is tested or when there is a power outage in excess of ten seconds. When a traditional automatic closing system is activated, tension by chain or cable to drop-out brackets will go slack and door spring tension will be released. The operator drive gearing will disengaged and curtain hanging weight / gravity will close the door. Now to open the door, a professional door service technician needs to rewind spring tension and re-engage the operator drive gearing. All this work must be done near the top to the unit at one or both ends of the bracket plates.

Cornell has both manual and electric operator **advanced automatic closing systems** that eliminate spring tension release of the door. Although these systems can be signaled to close by alarm systems or power failure, they **can be reset as easily as pushing the open button** on a control station. These advanced type fire door systems will not require calling professional door technicians to reset the doors due to routine alarm testing or power outages. These systems also alleviate workflow disruptions allowing fire doors to be opened immediately after alarms are cleared.

These longer term cost saving benefits of advanced fire door systems need to be considered up front when selecting and specifying an automatic closing system. The initial savings of a traditional system can be quickly eroded away by the cost and frustration of future door resetting and workflow disruption.

Order your fire door right the first time by specifying a Cornell advanced fire door system. Because of their maximum reliability, controlled automatic closing speed, and most importantly, their ability to never require mechanical spring tension resetting, Cornell recommends the M100 FireGard™ System or if conditions allow, the EZ Test 'n Set for chain operated applications. Please read on to learn more about these advanced automatic closing systems!

UL Listing Information Reference Chart

Cornell Product	UL Product Category	UL Category Control Number	UL File Number	Rating	Canadian Category	Canadian Control Number
Fire Doors	Rolling-Steel Type Fire Doors	GSVV.R1422	R1422	4 HR, 3 HR, 1-1/2 HR, 1 HR or 3/4 HR	Rolling-Steel Type Fire Door Certified For Canada	GSVV7.R1422
Counter Fire Doors - up to 12'W x 10'H	Service Counter Type Fire Doors	GSWT.R15854	R15854	1-1/2 HR, 1 HR or 3/4 HR	Service Counter Type Fire Doors Certified For Canada	GSWT7.R15854
Counter Fire Doors - to 12'W x 10'H, (16'W x 7'6" Oversize)	Rolling-Steel Type Fire Doors	GSVV.R1422	R1422	3 HR, 1-1/2 HR, 1 HR or 3/4 HR	Rolling-Steel Type Fire Door Certified For Canada	GSVV7.R1422
Labeled Integral Frame and Countertop Units	Service Counter Type Fire Doors	GSWT.R15854	R15854	1-1/2 HR, 1 HR or 3/4 HR	Service Counter Type Fire Doors Certified For Canada	GSWT7.R15854
SmokeShield® Units	Leakage Rated Door Assemblies	OPBW.R1422	R1422 or R15854	R15854: 1-1/2 HR, 1HR or 3/4 HR R1422: 3 HR or 1 HR	N/A	N/A
Labeled Countertops	Miscellaneous Fire Door Accessories	GVUX.R15865	R15865	1-1/2 HR	Miscellaneous Fire Door Accessories Certified For Canada	GVUX7.R15865

For more detailed UL listing information, refer to the appropriate individual product section.

UL Listing Information – Cornell Counter Fire Doors

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The UL Listing Mark is used in connection with products that have been evaluated by UL and found to be in compliance with UL's requirements.

Counter Fire Doors to 12'W x 10'H, with 1-1/2 hr, 1hr or 3/4 hr Labels

Cornell's Counter Fire Doors products of this size have been UL approved and are listed under the following UL Product Category and Control Number: **Service Counter Type Fire Doors – GSWT.R**

UL File Number: **R15854**

Ratings: 1-1/2 HR, 1 HR or 3/4 HR

Certification for Canada: Counter Fire Doors of this size UL certified for use in Canada can be found under the UL Product Category "Service Counter Type Fire Doors Certified for Canada", Control Number GSWT7.R15854

Counter Fire Doors to 12'W x 10'H or 16'W x 7'6"H, with 3 hr, 1-1/2 hr, 1 hr or 3/4 hr Labels

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UL File Number: **R1422**

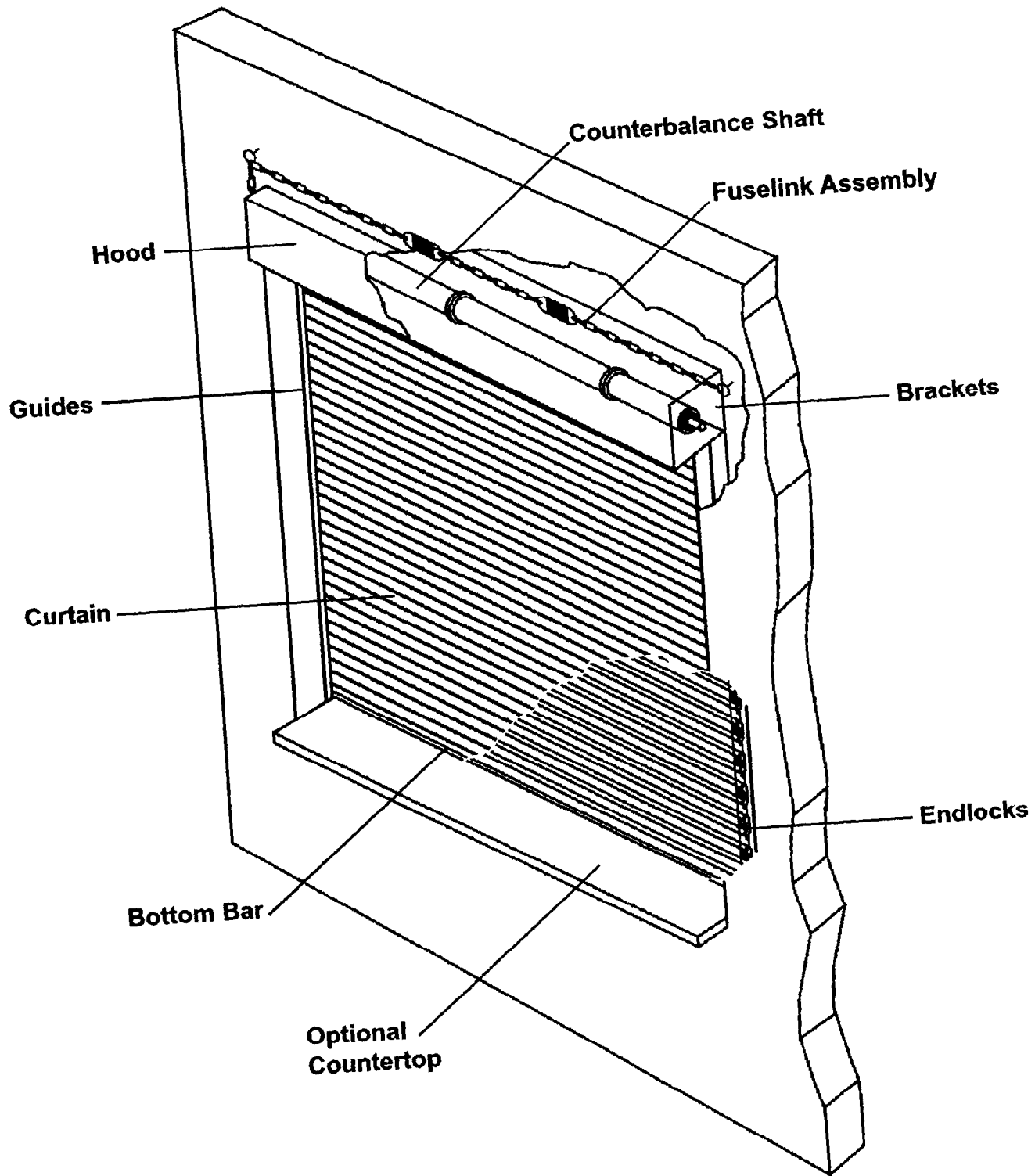
Ratings: 3 HR, 1-1/2 HR, 1HR or 3/4 HR

Sizes: Classified for openings up to 12'W x 10'H. Counter fire doors over 12'W x 10'H up to 16' W x 7'6"H, are eligible for Oversize Labels. For a further description of Oversize doors, see UL category GSNV.

Certification for Canada: Counter Fire Doors of this size UL certified for use in Canada can be found under the UL Product Category "Rolling-Steel Type Fire Doors Certified for Canada", Control Number GSVV7.R1422.

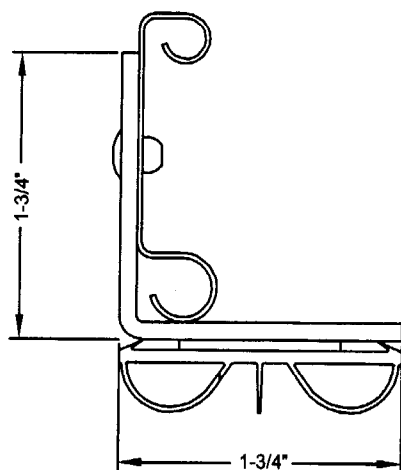
For more detailed UL information, visit the Underwriter's Laboratory website at www.ul.com

Counter Fire Door Assembly Drawing

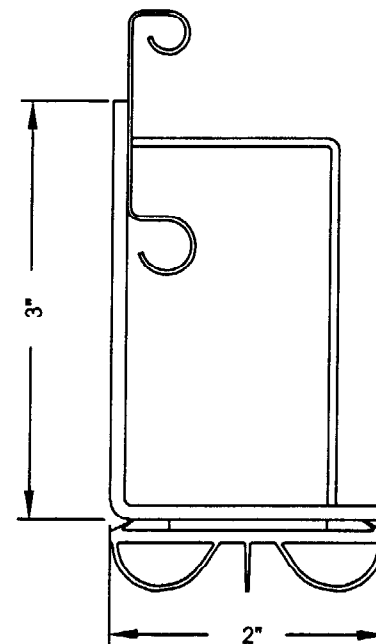


Rolling Counter Fire Door Bottom Bar and Accessories Options

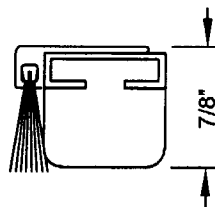
STANDARD STEEL ANGLE BOTTOM BAR
WITH VINYL ASTRAGAL



TUBULAR STEEL BOTTOM BAR
WITH VINYL ASTRAGAL
(STANDARD ON UNITS WHEN CYLINDER LOCKS ARE SUPPLIED)

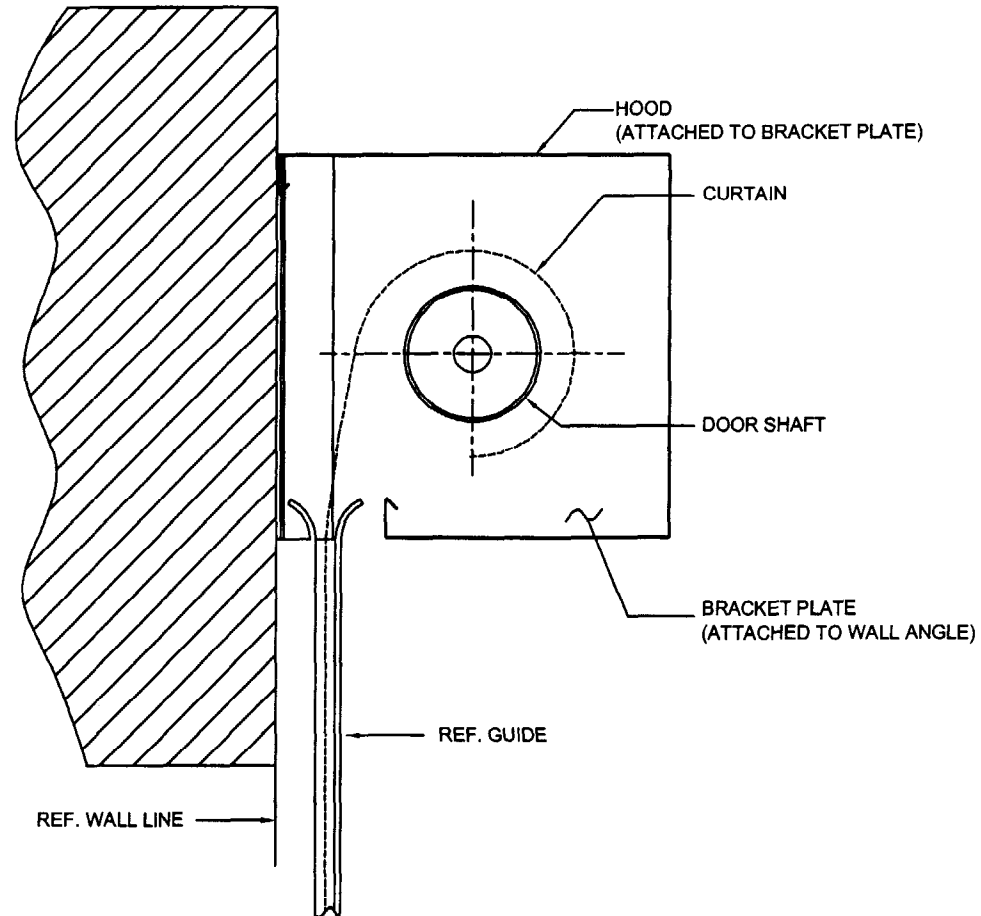


ELECTRIC SENSING EDGE (OPTIONAL)
(STANDARD WITH M100 OPERATORS)



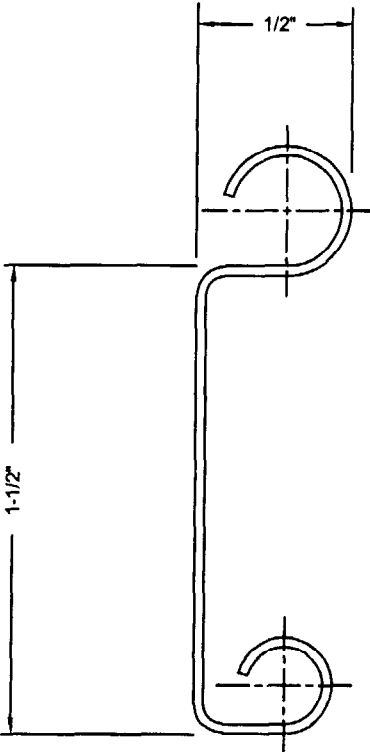
Counter Fire Door Face of Wall Hood Detail

HOODS DO NOT IMPOSE LOAD ON HEADER.
DOORS ARE SUPPORTED BY JAMBS.



Rolling Counter Fire Door Slat Detail

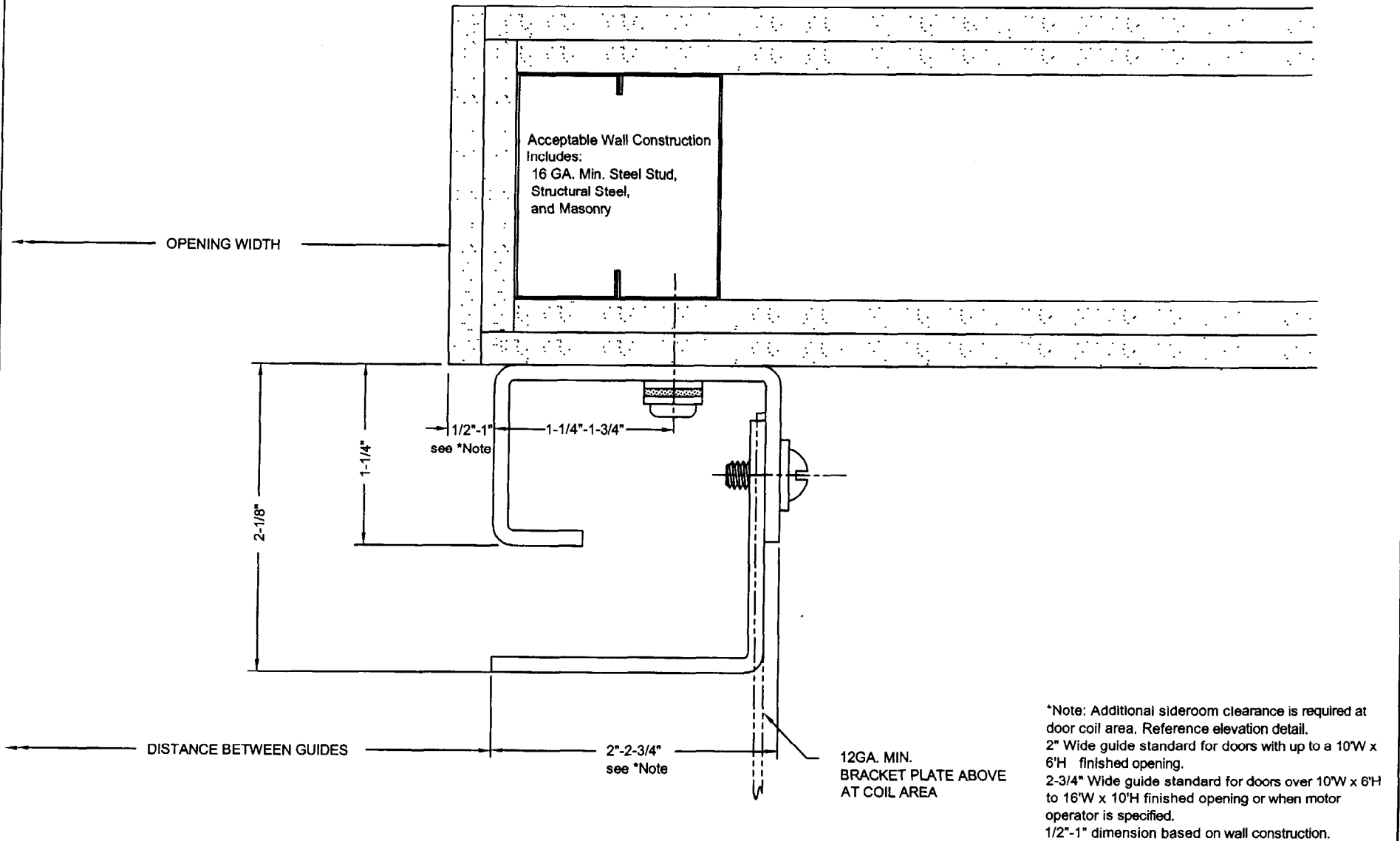
STANDARD ROLL FORMED FLAT SLAT



Roll Formed Slat
Available Material and Gauges:
Galvanized Steel: #22
Stainless Steel: #22

#1F- C5P FLAT SLAT

Reference Detail- Rolling Counter Fire Door Guide Face of Wall Mounted to Drywall



OPERATOR BRACKET

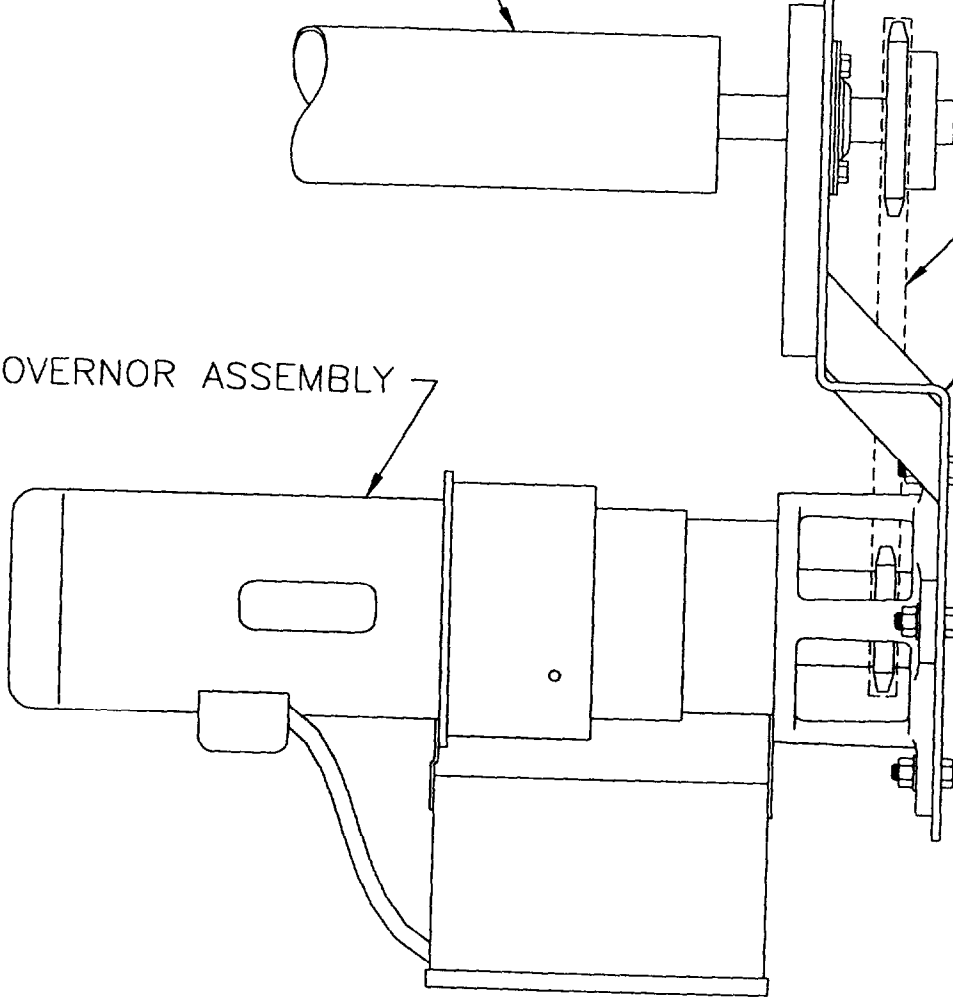
4 1/2" +

SHAFT ASSEMBLY

DRIVE CHAIN

BRACKET
PLATE

MOTOR/GOVERNOR ASSEMBLY



NOTES:

- 1. 4" SHAFT ASSEMBLY SHOWN WITH 1 HP MOTOR, OTHER SHAFT ASSEMBLIES AND MOTOR SIZES SIMILAR.

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IRON WORKS

New Solutions. Since 1828.™

Mountaintop, Pennsylvania

TITLE:

GOVERNOR BRACKET ASSEMBLY
(COMBINATION MOTOR/GOVERNOR ASSEMBLY)

SCALE:

N/A

DATE:

DRAWN BY:

DRAWING NO.: