

# Rittling Cabinet Convector

Submittal Data,  
English Language, IP Units

## Submittal data

Unit designation
Job name
Architect
Engineer
Contractor

## Performance data

Heating capacity
BTU/hr
Entering water temperature
°F
Entering air temperature
°F
Water flow
GPM
Operating weight
lb.



# Cabinet Convector Submittal Data

English, IP Units

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# Cabinet Convector Submittal Data

English, IP Units

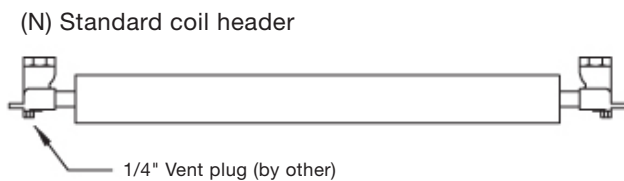
## Standard unit features

### Heating elements

Heating elements are available in three standard nominal depths: 4" with 2-tube element; 6" with 3-tube element; and 8" with 4-tube element. The element assembly is protected by shield plates running the entire length of the element, and is supported in enclosure by a welded bracket to eliminate strain on piping or element. Fins of 0.010" aluminum have integral collars to assure uniform spacing. Tubes are mechanically expanded into collars to permit maximum heat transfer. Headers are cast brass with 3/4" NPT top or bottom tapings.

### Reversed headers

One header can be reversed to be mounted "up," while the other is mounted "down," for reverse piping applications. (Specify when ordering.)

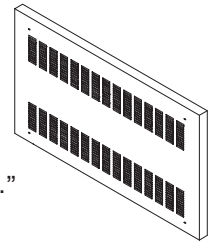


### Enclosures

Rittling Convectors are specially constructed to satisfy the requirements of strength and safety in many different building applications. Rittling Convectors are also available in louvered, perforated and aluminum grille inlet and outlets.

### Inlets and outlets

Standard units have louvered optional inlets and outlets. Units are available in 16-gauge and 14-gauge. The louvered openings are fabricated to be "pencil proof."



### Finish

All convectors are thoroughly cleaned and phosphatized after fabrication and finished with a polyester-epoxy powder coating.

### Units shown, back to front:

- Type SL wall-mounted with slope top louvered outlet.
- Type FL floor-mounted with optional arched inlet and vertical architectural bar grille outlet.
- Type SF free standing with slope top and optional security perforated inlet/outlet.

# Cabinet Convector Submittal Data

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## Optional unit features

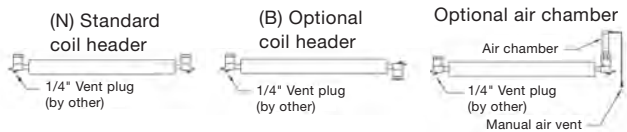
### Metal gauge

Options	A	B	C	D	E	F	G	H	J
Liner	20	18	20	18	16	20	18	16	14
Front	18	18	16	16	16	14	14	16	14

- Consult factory for 12 GA. options
- Consult factory for stainless steel option

### Element Connections

- Standard coil header (N)
- Optional coil header (B)
- Optional air chamber



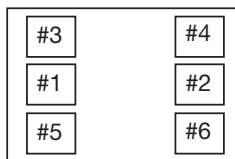
### Security

#### Access doors

Access doors are provided in the front panel of Cabinet Convectors for inspection or operation of valves, traps or air vents. These doors are attached on one side with a heavy-duty hinge. A 1/4-turn locking device is provided with an optional Allen-head or spanner-head operator when security conditions dictate. Access doors are available in many locations; consult factory for best positions.

Access doors are available in many locations.

- Certain door applications depend on the height and length of the cabinet
- Consult factory on door applications below 20" high



- All doors are 5" x 5" (standard)
- #5 & #6 NOT available on SL and WL types
- #3 & #4 NOT available on SL and SF types

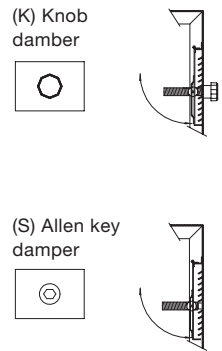
### Door Hardware

- Slot Head (standard)
- Allen Key (security)
- Spanner (security)



### Damper

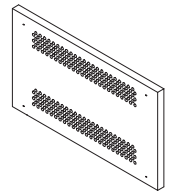
The damper assembly covers the entire outlet area of the enclosure and consists of a 20-gauge cold rolled steel damper blade painted to match cabinet color, which is flanged at the top and bottom for additional rigidity. Standard damper assemblies are equipped with a knob operator or an optional tamper-resistant operator functions with a simple Allen wrench and is particularly valuable in school or institutional settings where only supervisory operation is desired.



### Inlets and outlets

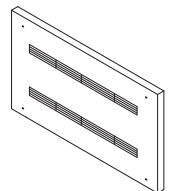
#### Perforation

Rittling institutional Convectors are available in two styles of perforations. 1/8" diameter holes on 3/16" staggered center lines are standard. 3/16" diameter holes on 1/4" staggered center lines are optional. Perforated convectors are available in optional 16-gauge, 14-gauge, and 12-gauge.



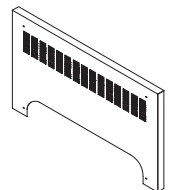
#### Bar grille

The optional architectural grille inlet and outlet consist of a heavy-duty extruded aluminum bar grille with a deep etched clear anodized (R-204) finish. Bar grille convectors are available in 16-gauge and 14-gauge. The vanes of the continuous extrusion have a 15° deflection for directional air flow. The grille opening is pencil proof. Consult factory for availability. Bar grille convectors are available in optional 16-gauge and 14-gauge.



#### Arched inlet

The optional arched inlet is available on models PL, SF & FL only. Type PL must be 3-sided overlap. Units with arched inlets can have louvered, perforated or bar grille outlets. Units are available in optional 16-gauge or 14-gauge. With perforated outlets, 12-gauge is also available.



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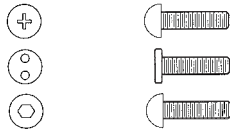
# Cabinet Convector Submittal Data

English, IP Units

## Optional unit features

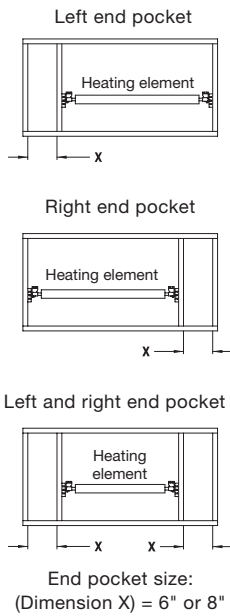
### Fasteners

- Phillips (standard)
- Spanner
- Allen Key



### End pockets

End pockets may be installed at one or both ends of the cabinet convectors. The heating element is shortened and a vertical baffle with element support is provided between the end of the element and the end of the cabinet. End pockets are available in either 6" or 8" widths. Consult factory for other custom end pocket designs. Consult factory for custom end pocket designs.



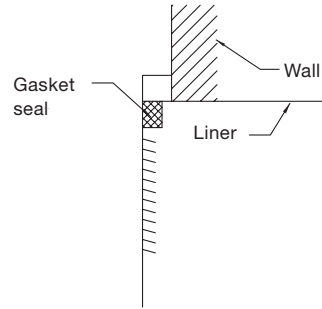
### Insulation

1/2" thick fiberglass insulation is available on convector sides, tops, fronts or backs for special

applications. (Top does not apply to sloping models.)

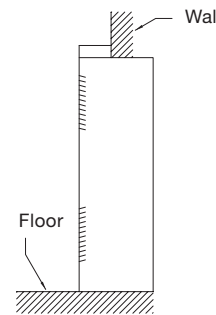
### Urethane Gasket

Available only for type PL and RL.



### Optional 3-sided Convector

Available only for type PL and RL.



### Color

Cabinets may be finished in one of the standard Zehnder Rittling decorator colors. Additional colors are optionally available, please furnish a color chip for custom color.

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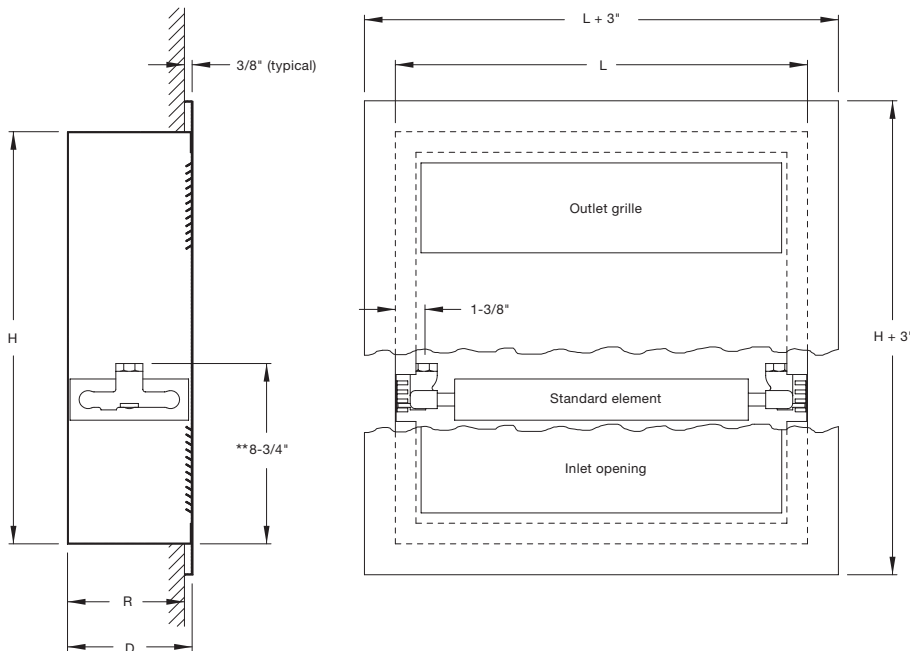
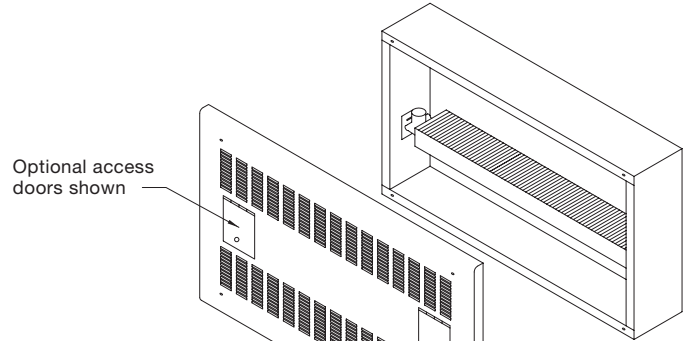
English, IP Units

## Dimensions and data

Model PL; fully recessed wall

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)	Maximum dimension (R)
24"	18"	4"	3-3/4"
28"	20"	6"	5-3/4"
36"	26"	8"	7-5/8"
40"	32"		
48"			
52"			
60"			
64"			

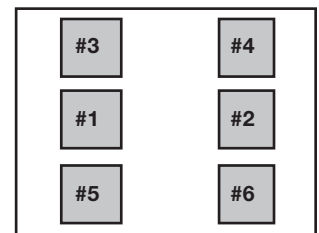
Any combination of length, height and depth is available.



### PL Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Less than 18"	All Lengths	0	No access door locations available	
18" to 19"	Less than 32" **	1	3, 4, 5, 6	4"H x 5"W
18" to 19"	Less than 32"	2	3, 5 or 4, 6	4"H x 5"W
18" to 19"	32" and longer	4	3, 4, 5, 6	4"H x 5"W
20" to 25"	Less than 32"	1	1, 2, 3, 4, 5, 6	4"H x 5"W
20" to 25"	Less than 32"	2	1, 2 or 3, 5 or 4, 6	4"H x 5"W
20" to 25"	32" and longer	4	3, 4, 5, 6	5"H x 5"W
26" and over	Less than 32"	2	1, 2 or 3, 5 or 4, 6	5"H x 5"W
26" and over	Less than 32"	4	1, 2, 3, 5 or 1, 2, 4, 6	5"H x 5"W
26" and over	32" and longer	6	1, 2, 3, 4, 5, 6	5"H x 5"W

### Standard Convector Access Door Locations



#### Note:

- Access doors not available in locations 5 and 6 with arched inlet.
- \*Contact factory on heights less than 20"

- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.

- \*\*The coil is adjustable 7/8" up in 7/16" increments.

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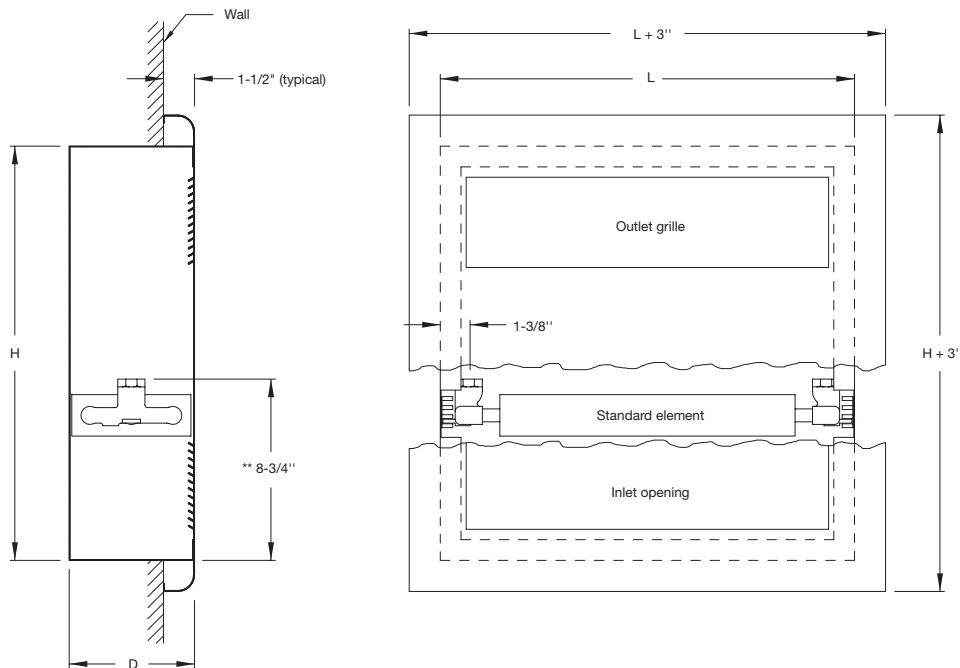
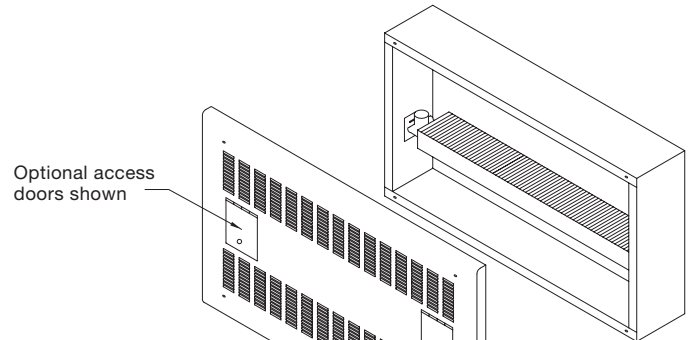
English, IP Units

## Dimensions and data

## Model RL; partially recessed wall

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)	Maximum dimension (R)
24"	18"	4"	3-3/4"
28"	20"	6"	5-3/4"
36"	26"	8"	7-5/8"
48"	32"		
52"			
60"			
64"			

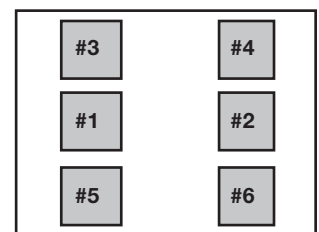
Any combination of length, height and depth is available.



### PL Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Less than 18"	All Lengths	0	No access door locations available	
18" to 19"	Less than 32" <sup>†</sup>	1	3, 4, 5, 6	4"H x 5"W
18" to 19"	Less than 32"	2	3, 5 or 4, 6	4"H x 5"W
18" to 19"	32" and longer	4	3, 4, 5, 6	4"H x 5"W
20" to 25"	Less than 32"	1	1, 2, 3, 4, 5, 6	4"H x 5"W
20" to 25"	Less than 32"	2	1, 2 or 3, 5 or 4, 6	4"H x 5"W
20" to 25"	32" and longer	4	3, 4, 5, 6	5"H x 5"W
26" and over	Less than 32"	2	1, 2 or 3, 5 or 4, 6	5"H x 5"W
26" and over	Less than 32"	4	1, 2, 3, 5 or 1, 2, 4, 6	5"H x 5"W
26" and over	32" and longer	6	1, 2, 3, 4, 5, 6	5"H x 5"W

### Standard Convector Access Door Locations



#### Note:

- Access doors not available in locations 5 and 6 with arched inlet.
- \*Contact factory on heights less than 20"

- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.

- \*\*The coil is adjustable 7/8" up in 7/16" increments.

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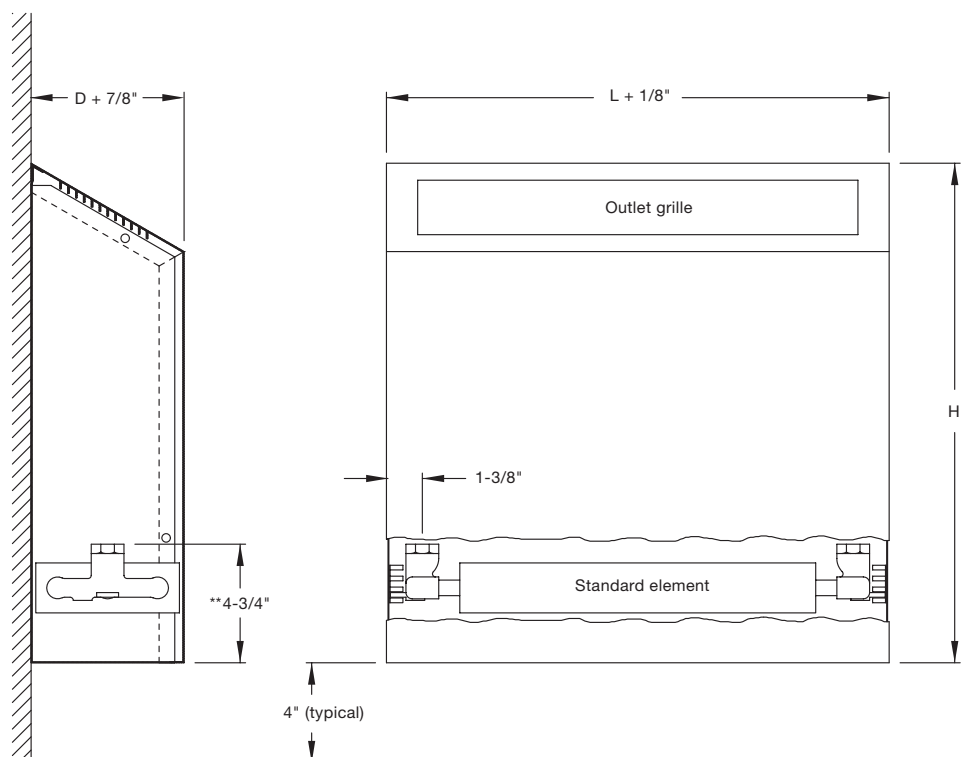
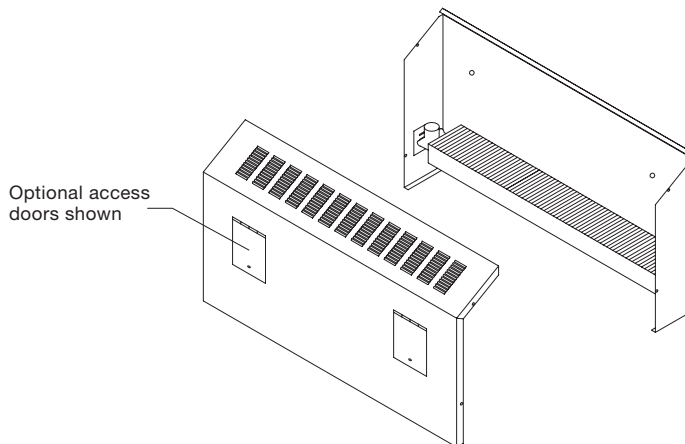
English, IP Units

## Dimensions and data

### Model SL; wall hung slope top

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)
24"	18"	4"
28"	20"	6"
36"	26"	8"
40"	32"	
48"		
52"		
60"		
64"		

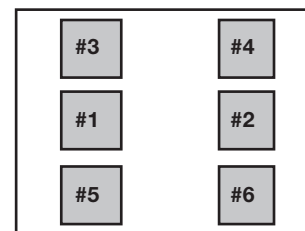
Any combination of length, height and depth is available.



#### SL Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Up to 20"	All lengths	2	1, 2	4"H x 5"W
20" and over	All lengths	2	1,2	5"H x 5"W

#### Standard Convector Access Door Locations



#### Note:

- \*Contact factory on heights less than 20"
- \*\*The coil is adjustable 7/8" up in 7/16" increments.
- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.

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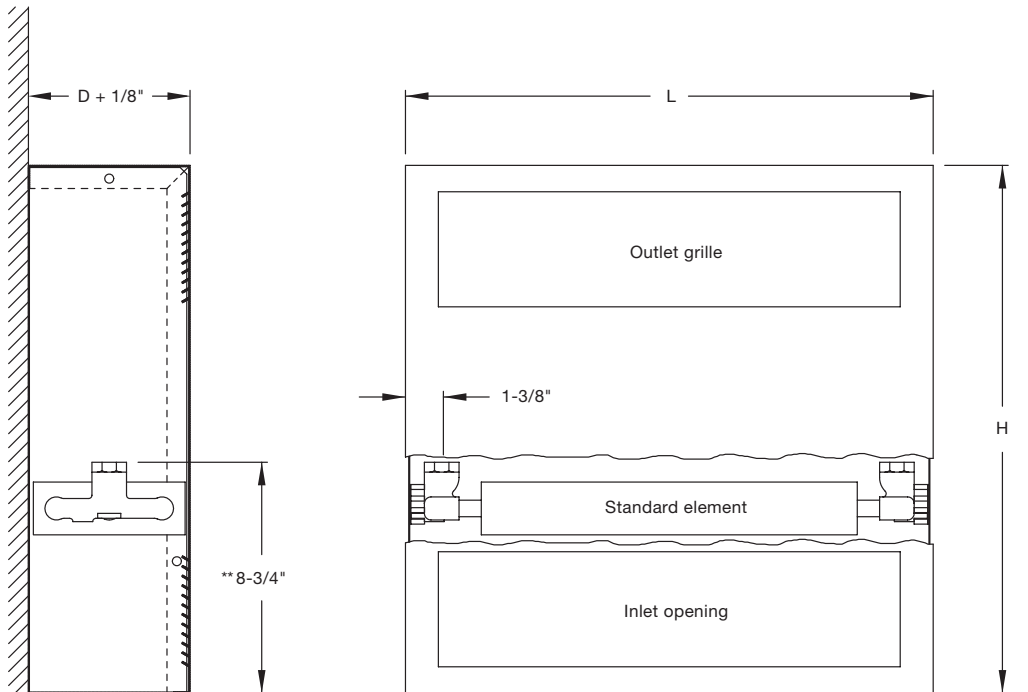
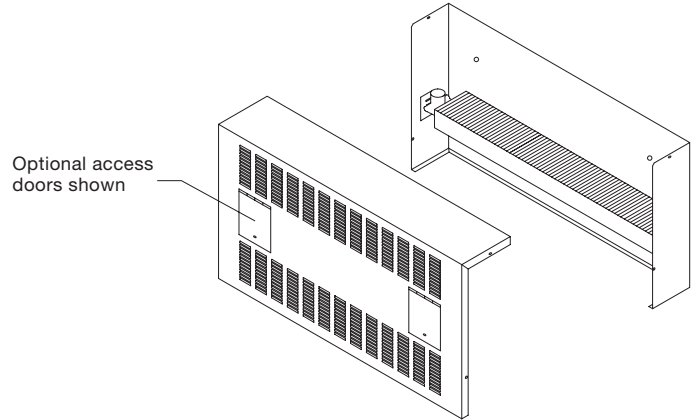
English, IP Units

## Dimensions and data

Model FL; free standing floor

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)
24"	18"	4"
28"	20"	6"
36"	26"	8"
40"	32"	
48"		
52"		
60"		
64"		

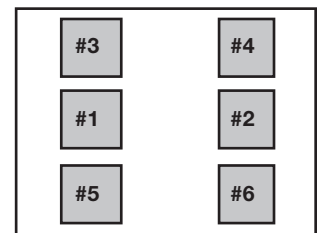
Any combination of length, height and depth is available.



### FL Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Up to 18"	Less than 32"	1	3, 4, 5, 6	4"H x 5"W
Up to 18"	Less than 32"	2	3, 5 or 4, 6	4"H x 5"W
Up to 18"	32" and longer	4	3, 4, 5, 6	4"H x 5"W
19"	Less than 32"	1	1, 2, 3, 4, 5, 6	4"H x 5"W
19"	Less than 32"	2	1, 2 or 3, 5 or 4, 6	4"H x 5"W
19"	32" and longer	4	1, 2, 5, 6	4"H x 5"W
20" and over	Less than 32"	2	1, 2 or 3, 5 or 4, 6	5"H x 5"W
20" and over	Less than 32"	4	1, 2, 3, 5 or 1, 2, 4, 6	5"H x 5"W
20" and over	32" and longer	6	1, 2, 3, 4, 5, 6	5"H x 5"W

### Standard Convector Access Door Locations



#### Note:

- Access doors not available in locations 5 and 6 with arched inlet.
- \*Contact factory on heights less than 20"

- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.

- \*\*The coil is adjustable 7/8" up in 7/16" increments.

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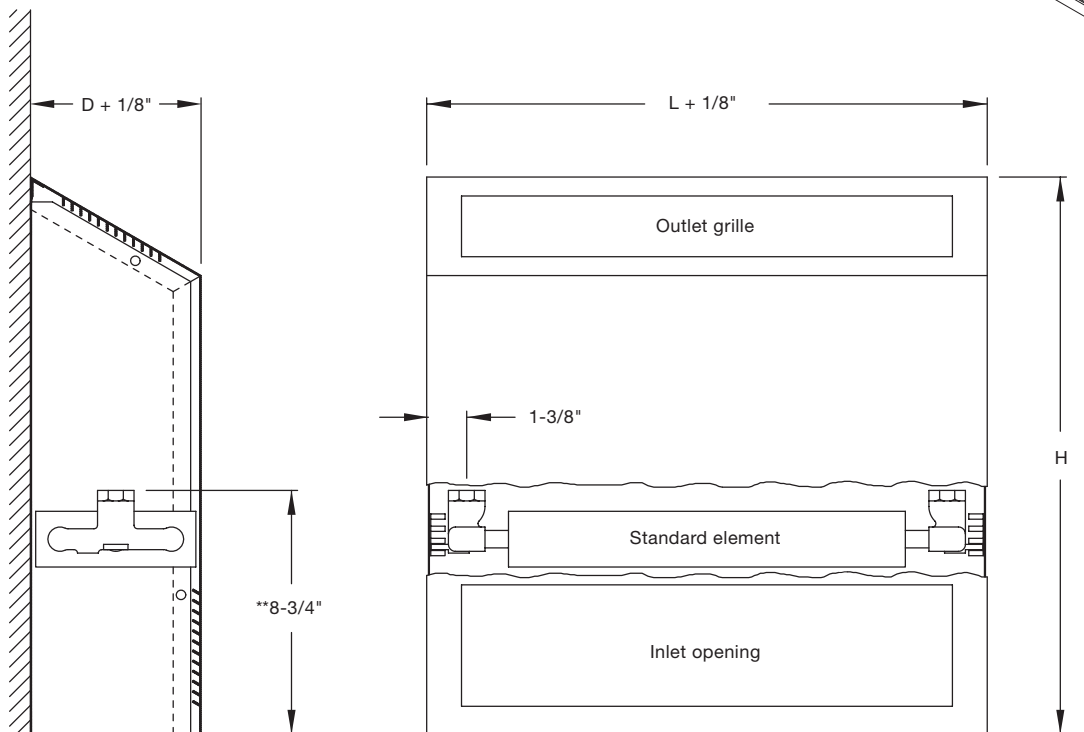
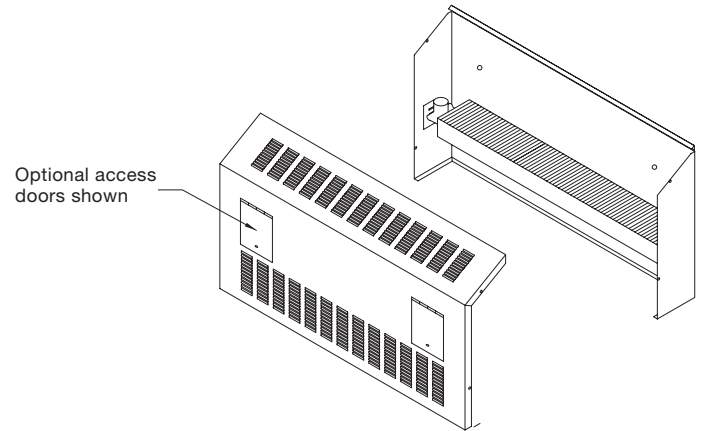
English, IP Units

## Dimensions and data

Model SF; free standing slope top

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)
24"	18"	4"
28"	20"	6"
36"	26"	8"
40"	32"	
48"		
52"		
60"		
64"		

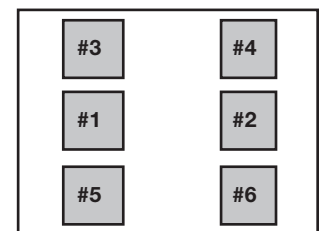
Any combination of length, height and depth is available.



### SF Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Up to 18"	Less than 32"	1	5 or 6	4"H x 5"W
Up to 18"	32" and longer	2	5, 6	4"H x 5"W
18" to 19"	Less than 32"	3	1, 2, 5 or 1, 2, 6	4"H x 5"W
18" to 19"	32" and longer	4	1, 2, 5, 6	4"H x 5"W
20" and over	Less than 32"	3	1, 2, 5 or 1, 2, 6	5"H x 5"W
20" and over	32" and longer	4	1, 2, 5, 6	5"H x 5"W

### Standard Convector Access Door Locations



#### Note:

- Access doors not available in locations 5 and 6 with arched inlet.
- \*Contact factory on heights less than 20"

- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.
- \*\*The coil is adjustable 7/8" up in 7/16" increments.

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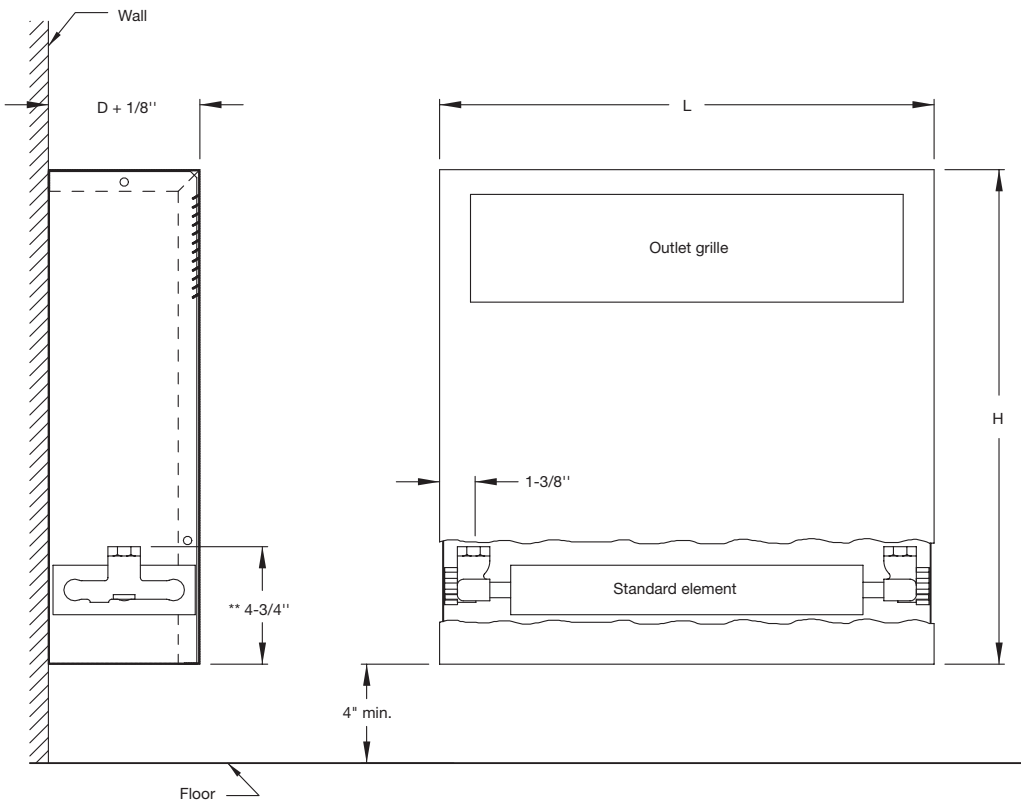
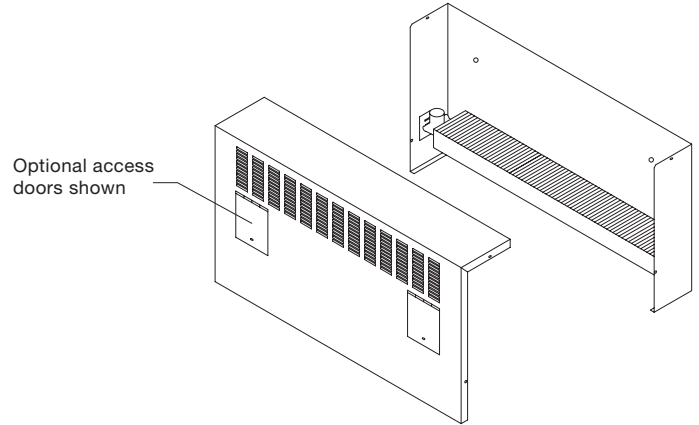
English, IP Units

## Dimensions and data

Model WL; wall hung

Nominal lengths (L)	Nominal heights (H)	Nominal depths (D)
24"	18"	4"
28"	20"	6"
36"	26"	8"
40"	32"	
48"		
52"		
60"		
64"		

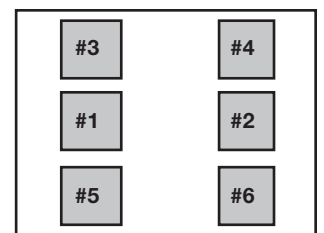
Any combination of length, height and depth is available.



### Standard Convector Access Door Locations

#### WL Convector Access Door Location Availability

Unit Height	Unit Lengths	# of Doors Available	Available Locations	Door Size
Up to 20"	Less than 32"	1	3 or 4, 1 or 2	4"H x 5"W
Up to 20"	32" and longer	2	3, 4 or 1,2	4"H x 5"W
20" and over	Less than 32"	3	1, 2, 3 or 1, 2, 4	5"H x 5"W
20" and over	32" and longer	4	1, 2, 3, 4	5"H x 5"W



#### Note:

- Access doors not available in locations 5 and 6 with arched inlet.
- \*Contact factory on heights less than 20"

- For convectors less than 28" long, end pockets are not offered as standard. Consult factory for availability.
- \*\*The coil is adjustable 7/8" up in 7/16" increments.

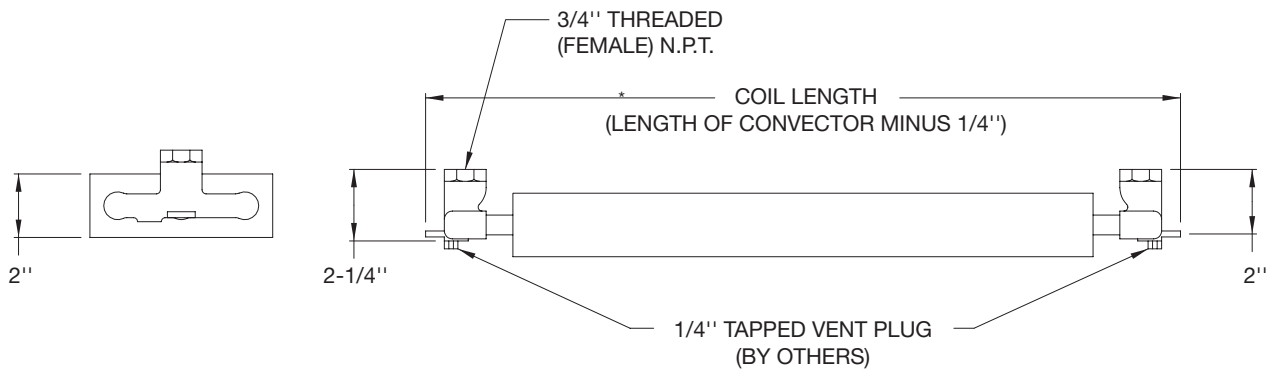
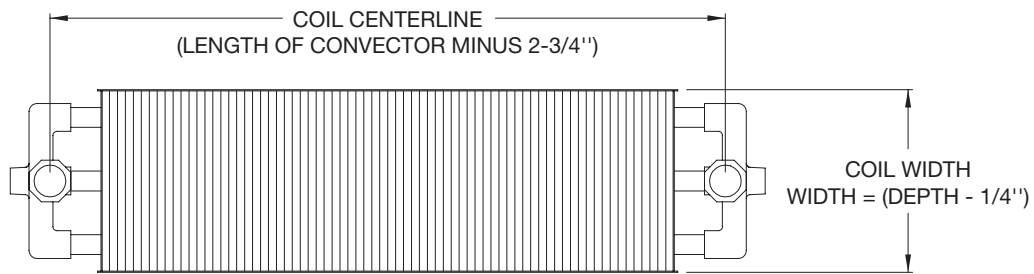
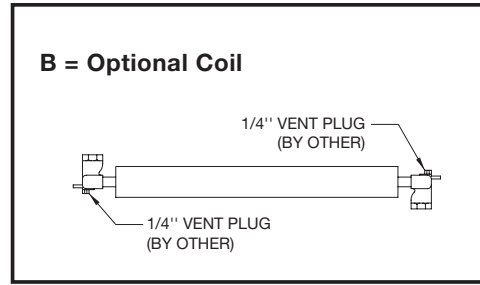
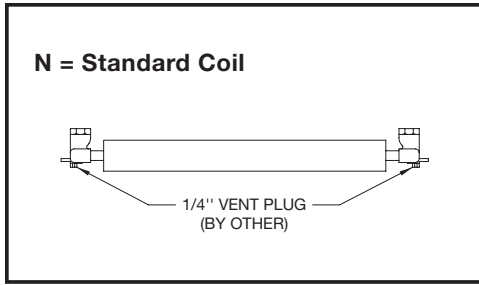
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# Cabinet Convector Submittal Data

English, IP Units

Dimensions and data

Coil



**Note:**

- Fins are 0.010" thick aluminum.
- Header material is cast brass.

- \*For Convectors with end pockets, subtract end pocket length from length of Convector.

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## Mechanical specifications

### General

The contractor shall furnish and install Rittling Convectors with required mounting components and accessories to meet size, capacity and characteristics as required on the Equipment Schedule or on the plans. Units shall be installed in a neat and workmanlike manner in accordance with specifications and manufacturer recommendations. All material shall be manufactured by Zehnder Rittling.

### Heating elements

The heating element is designed for either two-pipe steam or two-pipe hot water systems. The coil is manufactured using non-ferrous 1/2" nominal copper tubing and aluminum fins which are die cut with a thickness of no less than 0.010". The fins have integral collars, which provide maximum heat transfer between the tubes and the fins. The tubes are mechanically bonded to the fins to ensure permanent contact.

The entire fin assembly shall be encased in a heavy gauge galvanized steel frame with spacers locked at regular intervals to provide added protection to the finned element.

Headers are cast brass with 3/4" FNPT tapings. Standard configuration is supplied with both inlet and outlet connections facing downward. Optional reverse tapping is available with one connection facing upward and the other connection facing downward.

Assembled heating elements shall be hydrostatically tested to 1700 PSI prior to leaving the factory.

### Cabinet construction

Enclosures shall be of the size and style as shown on the plans. The cabinet fronts shall be manufactured from 12-gauge, 14-gauge, 16-gauge or 18-gauge standard. Pick one - cold rolled steel. Cabinet front shall be flanged on top and sides for added rigidity. The cabinet shall be reinforced and braced where necessary to provide additional stiffness. The liners shall be manufactured from 12-gauge, 14-gauge, 16-gauge, 18-gauge or 2-gauge standard. Pick one - cold rolled steel. 18-gauge cold rolled steel heating element support brackets shall be spot welded to the inside ends of the liners. Heating element support brackets allow for pitch adjustments of up to 1-1/4" for return of condensation in steam systems and as required by piping arrangements. Cabinet fronts are to be attached to liners using Phillips head fasteners standard. [Tamper proof Spanner head fasteners] [Tamper proof Allen Head fasteners]

Convector shall be provided with an air inlet/air discharge configuration as listed below. Must specify for each unit.

- Louvered inlet and/or outlet that are die-formed to allow directional flow of air with the maximum amount of free open area. The louvered openings are fabricated to be "pencil proof."
- Security perforated inlet/perforated outlet shall be provided with 1/8" diameter holes on 3/16" staggered centerlines. 3/16" diameter holes on 1/4" staggered centerlines is also available.
- Architectural grille inlet and/or outlet shall be a heavy-duty extruded aluminum bar grille with a deep etched clear anodized finish. The vanes of the continuous extrusion shall have a 15-degree deflection for directional airflow. The grille opening shall be "pencil proof."
- Arched inlet, available on SF, FL, RL and PL models, when an open inlet is required for floor mounted units. PL and RL models to be 3-sided overlap with this option.

## Mechanical specifications

Convector cabinets shall be provided with the following configurations:

- Type SF: This fully exposed floor convector has sloping outlet and is designed for mounting to a sidewall. The inlet air is directed through bottom front inlet. Louvered inlet and outlet as standard.
- Type FL: This fully exposed floor mounted convector is attached to the sidewall. The flat top design features front outlet and bottom front inlet. Louvered inlet and outlet as standard.
- Type SL: This fully exposed wall mounted convector with slope outlet. The inlet air is directed through the open bottom.
- Type WL: This fully exposed wall convector features a flat top with front vertical outlet. Inlet air passes through the open bottom.
- Type RL: This semi-recessed convector is designed for partially recessed wall mounting. The front inlet and outlet are advantageous where wall space is limited. The liner is recessed partially into the wall leaving the remaining front panel exposed. Louvered inlet and outlet as standard.
- Type PL: This convector is designed for full recess into the wall. The front inlet and outlet are advantageous where wall space is limited. The liner is recessed completely into the wall leaving only the front panel exposed. Louvered inlet and outlet as standard.

### Finish

All enclosures and accessories shall be degreased and chemically phosphatized before application of a durable, attractive electrostatic epoxy powder coating. Color to be selected from standard Zehnder Rittling color chart.

### Accessories and options

- Dampers shall be provided where indicated. Damper blades shall be fabricated from 20-gauge cold rolled material painted to match enclosure color. Threaded damper screw and trunnion shall provide positive operation of blade to provide variable heat output. Solid plastic damper knobs attached to damper screw shall operate damper. Recessed security Allen head operators shall be used in secure areas as indicated. Security damper must be operated by use of a hex key.
- Access doors shall be flush mounted with doors hinged at the top and use a slotted fastener-standard. Tamper proof spanner head fasteners and tamper proof Allen head fasteners are optional
- Convectors shall be provided with 1/2" thick faced fiberglass insulation on cabinet fronts, liners and sides for special applications.
- Urethane gasket seal shall be provided to seal front cover (type PL only).
- End pockets shall be installed when noted on drawings and schedules. End pockets shall be left end only, right end only or both ends. Pick one. When provided the heating element shall be shortened and vertical baffle with element support shall be provided between the end of the element and the end of the cabinet. The end pocket length shall be 6" long or 8" long. Pick one. Consult factory for custom end pocket requirements.
- Units shall be manufactured in accordance with conformance to ISO 9001:2008 standards.

# Cabinet Convector Submittal Data

English, IP Units

## Gasket

The high-tack permanent rubber-based pressure sensitive adhesive exhibits a superior balance of tack, peel and holding power on a wide variety of surfaces. Resists water and moisture, has very good air permeability, and remains flexible over a long period of demanding usage.

### Features

- Pressure sensitive adhesive with excellent grab
- Polyester urethane foam is highly flexible, fine cell, fully clickable that is uniform and breathable without voids or tears
- Tape resists aging, weather and environmental damage over long term
- Excellent adhesion to wide range of surfaces
- Seals out moisture and dust, dampens sound and vibration

### Adhesion properties

Test	Typical performance	Test method
Loop tack	115 oz./in. typical	TLM1 LIB1
Adhesion to steel immediate @ 72 °F	7 lbs./in. width or foam tear	PSTC-1
Adhesion to steel after 24 hrs. @ 72 °F	8 lbs./in. width or foam tear	PSTC-1
Adhesion to steel, 20 minute dwell	10 lbs./in. width minimum	PSTC-1
Static shear @ 72 °F 1 x 1 x 500 grams	1000 hours minimum	PSTC-7
Static shear @ 72 °F 1 x 1 x 1000 grams	200 hours minimum	PSTC-7
Optimal application temperature	50 °F to 80 °F	Pres-on PTM-1
Functional temperature	0 °F to 140 °F	Pres-on PTM-2
Shelf life	1 year stored at room temperature	



### Physical properties

Property	Test method	Unit of measure	Result
Density	ASTM D-3574-81	lb./ft. <sup>2</sup>	2 +10%
Tensile strength	ASTM D-3574-81	psi	17 - 25
Elongation	ASTM D-3574-81	%	125 - 175
Tear resistance	ASTM D-3574-81	PPI	1.4 - 2.2
Compression set (50%-22 hrs @ 70 °F)	ASTM D-3574-81	%	10 (max.)
Compression force 25% Deflection: 0.60 to 0.85 50% Deflection: 0.70 to 1.00 70% Deflection: 1.30 to 2.10	ASTM D-3574-81	psi	
Cell count	Visual	Pores per inch	50 to 60
Retention of tensile strength 6 hours autoclave @ 120 °C: 70% 24 hours dry heat aging @ 140 °C: 80%	ASTM D-3574-81	%	
Flammability (thickness approval @ .062)	UL94	Drippless minutes	94 HF-1

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# Cabinet Convector Submittal Data

English, IP Units

## Fiberglass insulation

### Description

Flexible duct liner insulation is made from strong, glass fibers bonded with a thermosetting resin. The airstream surface is protected with a reinforced coating system, which combines a state-of-the-art acrylic coating with a flexible glass mat reinforcement to provide a smooth airstream surface.

### Advantages

- Improves indoor environmental quality by helping to control both temperature and sound.
- The tough, acrylic polymer coating helps guard against the incursion of dust or dirt into the substrate, minimizing the potential for biological growth.
- Coating is formulated with an immobilized, EPA-registered, protective agent to protect the coating from potential growth of fungus and bacteria. Duct liner meets all requirements for fungi and bacterial resistance. Tests were conducted in accordance with ASTM C 1338 and ASTM G 21 (fungi testing) and ASTM G 22 (bacteria resistance testing). **Note:** As with any type of surface, microbial growth may occur in accumulated duct system dirt, given certain conditions. This risk is minimized with proper design, filtration, maintenance and operation of the HVAC system.
- The reinforced coating surface provides superior resistance to penetration of incidental water into the fiber glass wool core.
- GREENGUARD® certification is proof that the product meets the Environmental Institute's indoor air quality standards for VOCs.

### Thermal performance

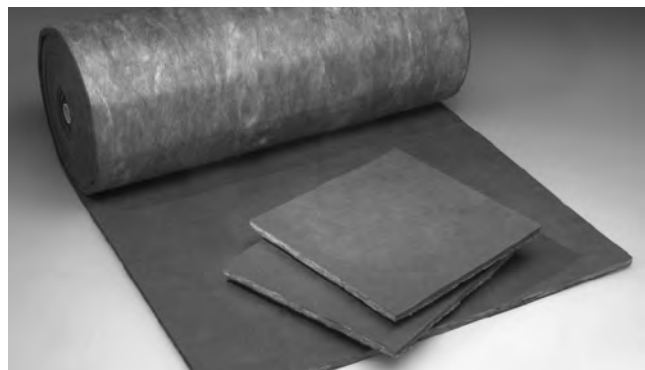
Thickness		R-value		Conductance	
in	mm	hr•ft <sup>2</sup> •°F/Btu	m <sup>2</sup> •°C/W	Btu/(hr•ft <sup>2</sup> •°F)	W/m <sup>2</sup> •°C
1/2	13	2.2	0.38	0.46	2.61

R-value and conductance are calculated from the material thermal conductivity tested in accordance with ASTM C 518 at 75 °F (24 °C) mean temperature

### Sound absorption coefficients (type "A" mounting)

Thickness		Sound absorption coefficient at frequency (cycles per second) of						
in	mm	125	250	500	1000	2000	4000	NRC
1/2	13	0.07	0.20	0.44	0.66	0.84	0.93	0.55

Coefficients were tested in accordance with Test Method ASTM C 423-90 and ASTM E 795



### General properties

- Operating temperature (max.): ASTM C 411 250 °F (121 °C)
- Air velocity (max.): ASTM C 1071 6,000 fpm (30.5 m/sec)
- Water repellency: INDA IST 80.6-92
- Fungi resistance: ASTM C 1338 Does not breed or promote
- Fungi resistance: ASTM G 21 No growth
- Bacteria resistance: ASTM G 22 No growth

### Surface burning characteristics

- Meets the surface burning characteristics and limited combustibility of the following standards: standard/test method
  - ◆ ASTM E 84
  - ◆ UL 723
  - ◆ NFPA 255
  - ◆ NFPA 90A and 90B, FHC 25/50 and limited combustibility
  - ◆ NFPA 259
  - ◆ CAN/ULC S102-M88
- Flame spread: not over 25
- Smoke developed: not over 50

### Specification compliance

- ASTM C 1071, Type I
- ASTM G 21 and G 22
- ICC Compliant
- California Title 24
- ASHRAE 62-2001
- SMACNA Application Standards for Duct Liners
- NAIMA Fibrous Glass Duct Liner Installation Standard
- Canada: CGSB 51-GP-11M and CAN/CGSB 51.11

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## Warranty

Zehnder Rittling guarantees its products to be free from defects in material and workmanship for a period of one year from date of shipment from our factory.

Should there be any defects in the good(s), the purchaser should promptly notify Zehnder Rittling. Upon receipt of written consent from Zehnder Rittling, the purchaser shall return the defective good(s) to the factory for inspection with freight prepaid. If inspection shows the goods to be defective, Zehnder Rittling will at its discretion repair or replace the said item(s).

Defects arising from damage due to shipment, improper installation, negligence or misuse by others are not covered by this warranty.

This warranty is extended only to the original purchaser from Zehnder Rittling.

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