

PRODUCT CATALOG

AIR TO AIR STANDARD COLOR

MAKING THE WORLD A COOLER PLACE

Contact Us
(512) 595-5700
sales@norenthermal.com

ABOUT US

For more than 50 years, Noren Thermal Solutions has delivered innovative thermal management solutions based on heat pipe technology, helping prevent electronic components from overheating. All of our products are designed and assembled in the USA, using the expertise and knowledge of our engineering and design staff.

You can rely on the high quality that represents us and our ability to solve heat transfer challenges with cutting-edge designs and technology. Our thermal solution-oriented philosophy, coupled with customer service and satisfaction, has earned us the freedom to think outside the box.

We are currently doing business worldwide and growing as an eco-friendly industry. We pride ourselves on delivering exceptional customer service with each thermal solution.

Mission Statement: Noren Thermal Solution is committed to engineering and manufacturing quality solutions for a variety of thermal challenges in an atmosphere of excellence.

Quality Policy Statement: Encompassing an attitude of continual improvement, Noren Products Incorporated is committed to teaming with our employees in an ethical business environment to provide innovative product solutions for our customers.

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Noren's Ambient Cooling Heat Exchangers use a heat pipe core technology; the waste heat is transferred from the enclosure through the core and into the ambient using fans strategically located at both sides of the heat exchanger, all of this while ensuring an airtight seal that prevents foreign contaminants and outside particles from entering the enclosure, keeping electronic components safe and clean.



AIR TO AIR DROP-IN

Noren Drop-In Heat Exchangers are designed to attach on the of electrical enclosures. The unit occupies space both inside and outside of the enclosure. They work by transferring waste heat through a specially designed heat pipe core to the ambient air outside of the enclosure. This enables the heat exchanger to lower the internal temperature of the enclosure, while also keeping an air-tight seal.

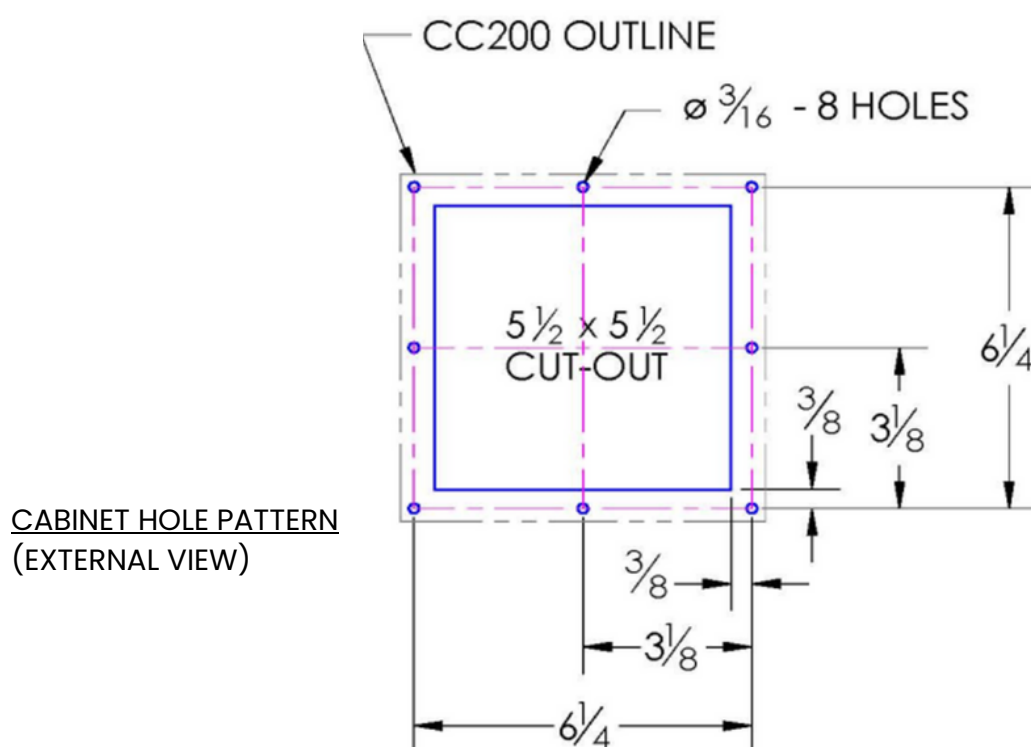
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THERMAL SOLUTIONS

■ HEAT EXCHANGER AIR TO AIR CC200

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC200	6 lbs	1,100	0.4	2x4"	11.5x5.13x4.63
Efficiency: 16.5 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

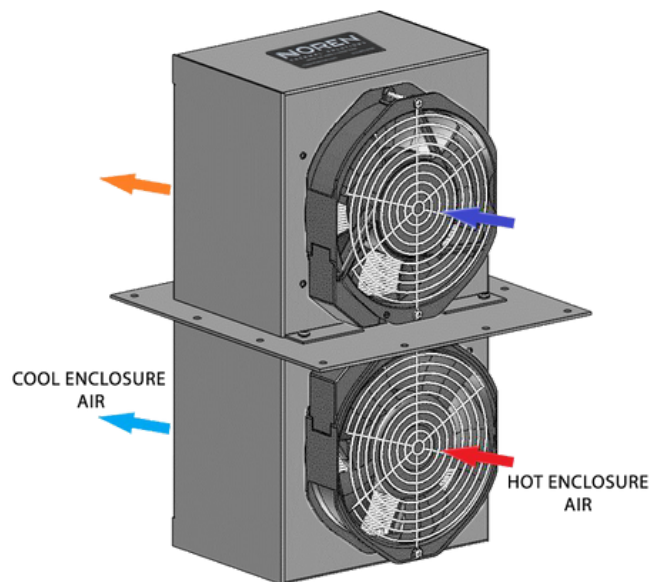


CC200 TYPE 12
Air to Air Drop-In Model

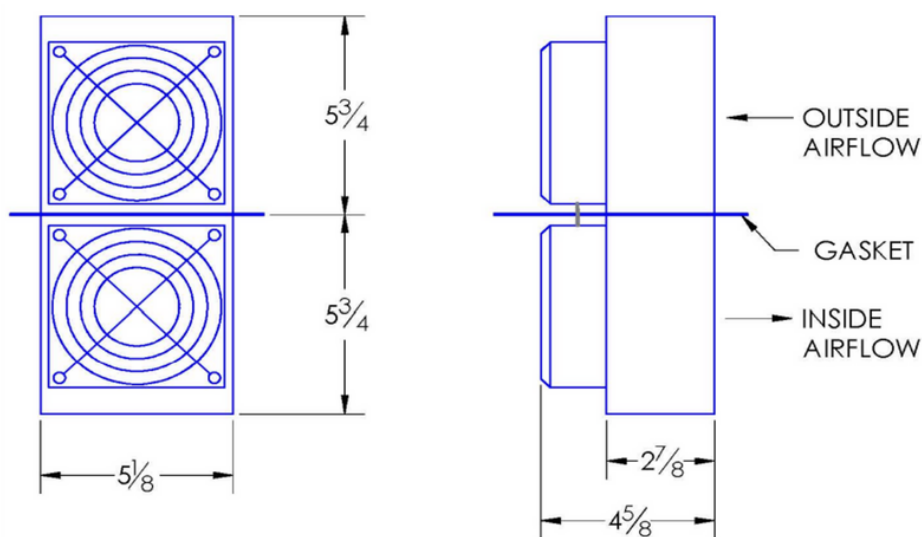


DROP-IN - CC200 TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC200 Rated cooling: 330 Watts at 20°C ΔT (16.5 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Extends 5-3/4" into the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. A power cord with a 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)

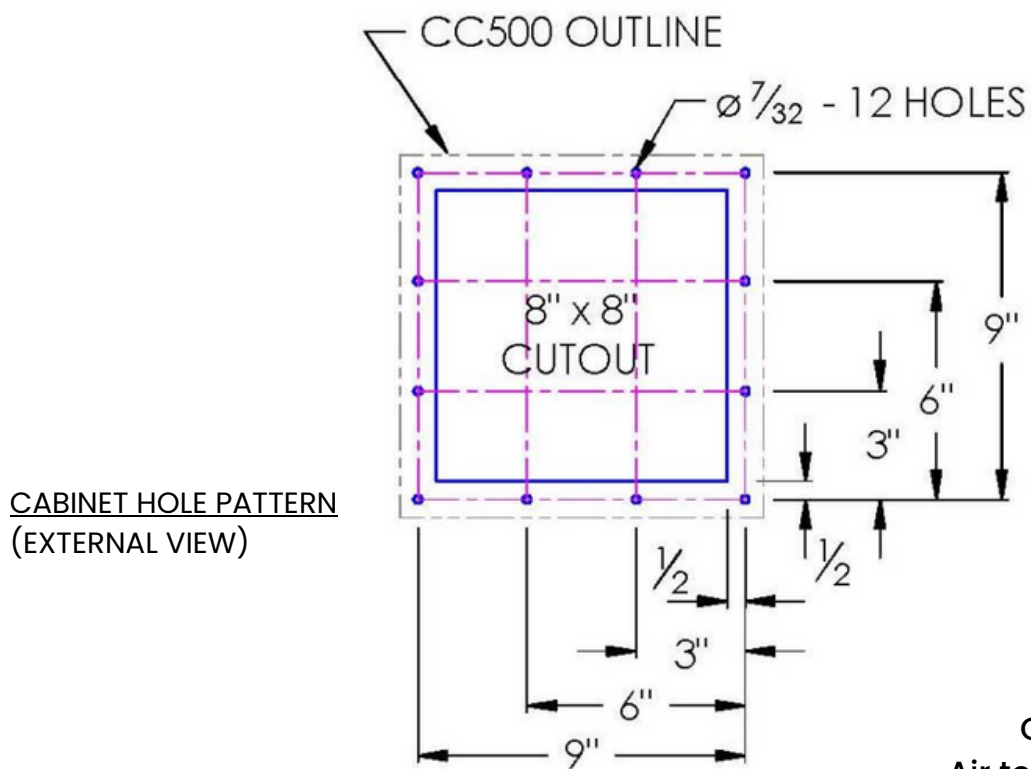


■ HEAT EXCHANGER AIR TO AIR CC500



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC500	11 lbs	2,400	0.6	2x6"	15x7.75x7
Efficiency:35.2 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

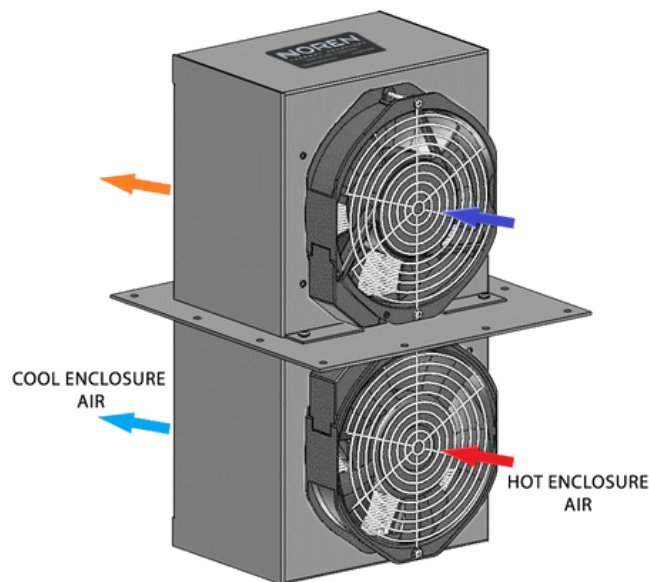


CC500 TYPE 12
Air to Air Drop-In Model

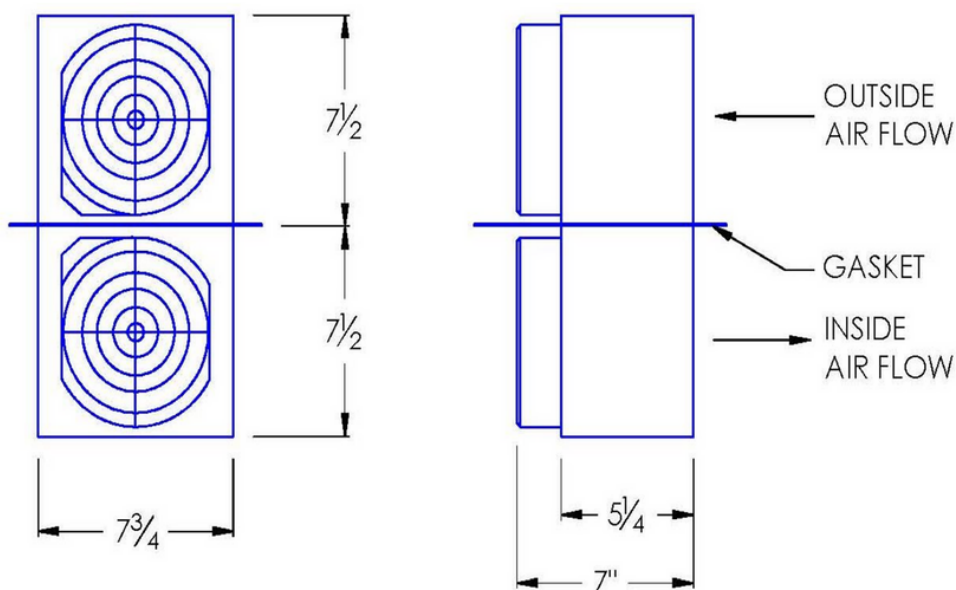


DROP-IN - CC500 TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC500 Rated cooling: 704 Watts at 20°C ΔT (35.2 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Extends 7-1/2" into the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. A power cord with a 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)

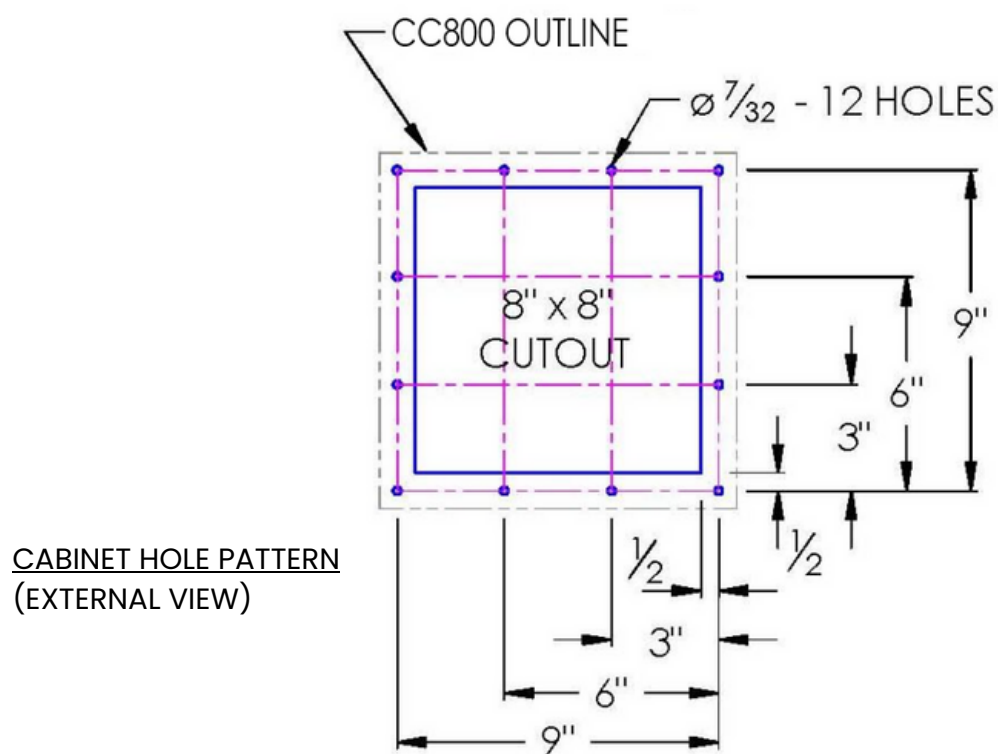


■ HEAT EXCHANGER AIR TO AIR CC800

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC800	16 lbs	3,800	0.6	2x6"	15x7.75x7
Efficiency: 55.2 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

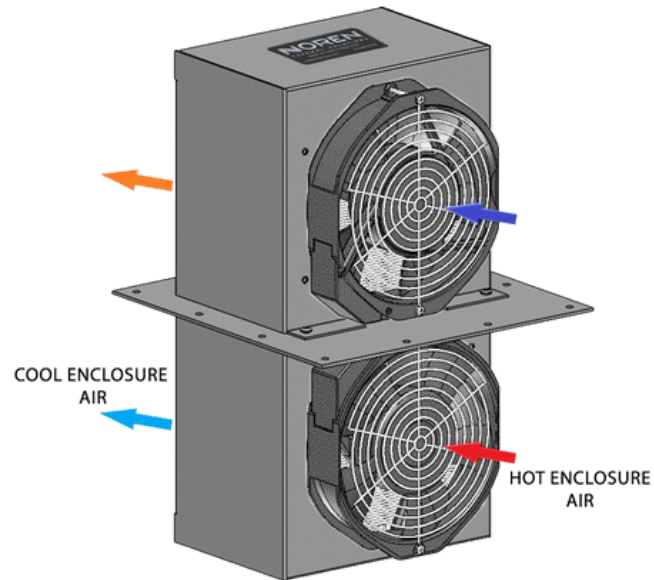


CC800 TYPE 12
Air to Air Drop-In Model

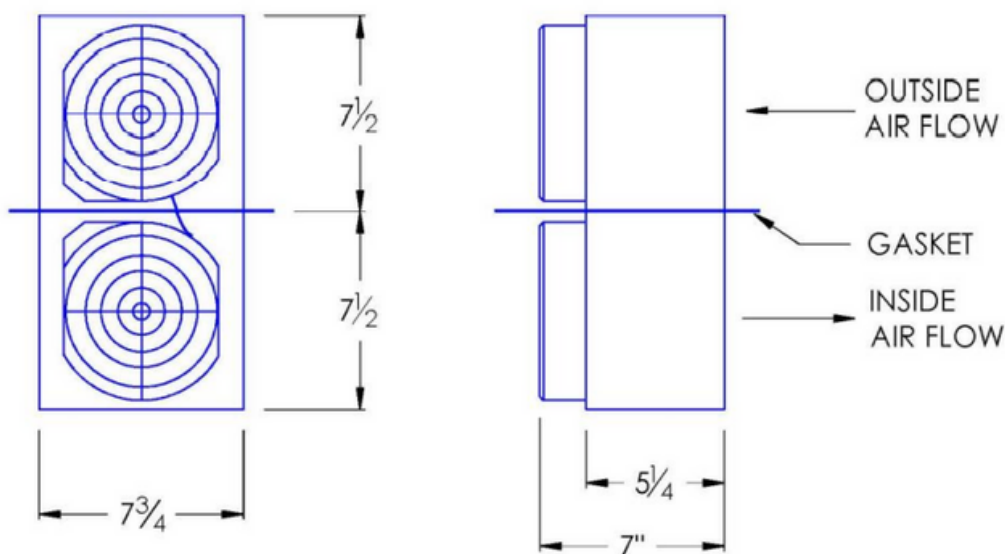


DROP-IN - CC800 TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC800 Rated cooling: 1,100 Watts at 20°C ΔT (55.2 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Extends 7-1/2" into the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. A power cord with a 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



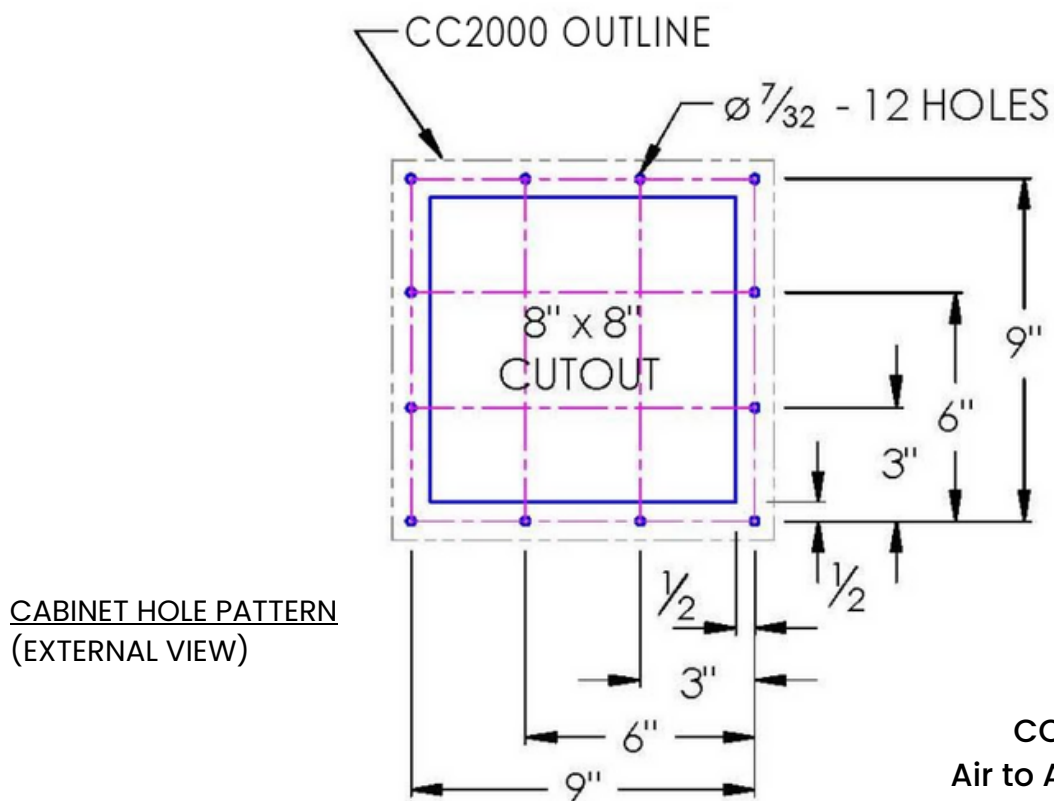
■ HEAT EXCHANGER AIR TO AIR CC2000



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC2000	28 lbs	7,500	1.2	4x6"	30x7.75x7

Efficiency: 110.4 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)



CC2000 TYPE 12
Air to Air Drop-In Model





AIR TO AIR FLUSH-MOUNT

AIR TO AIR FLUSH-MOUNT

Noren Flush-Mount heat exchangers are designed to attach to the side or door of electrical enclosures. Unlike the Drop-In units, the Flush Mount units do not protrude into the enclosure. They work by transferring waste heat through a specially designed heat pipe core to the ambient air outside of the enclosure. This enables the heat exchanger to lower the internal temperature of the enclosure, while also keeping an air-tight seal.

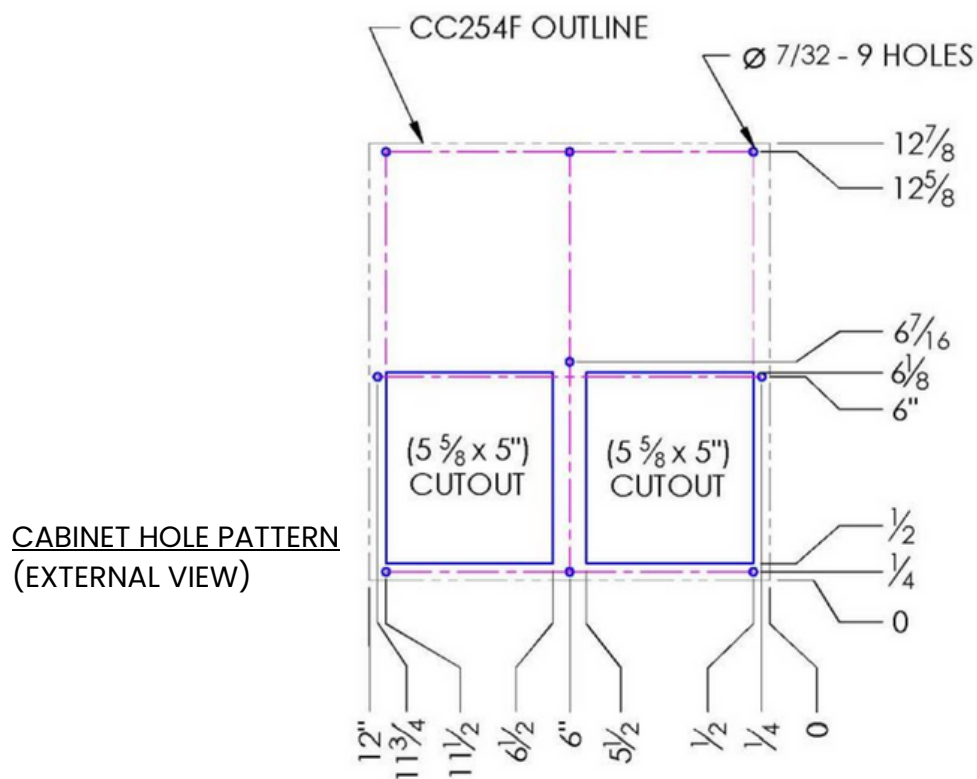


■ HEAT EXCHANGER AIR TO AIR CC254F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC254F	8 lbs	1,100	0.4	2x4"	12.8x12x4
Efficiency: 16.5 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

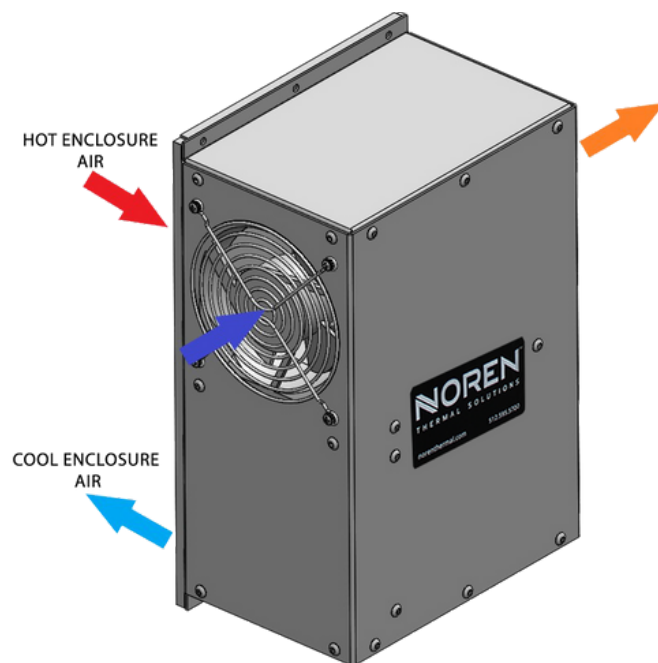


CC254F TYPE 12
Air to Air Flush-Mount Model

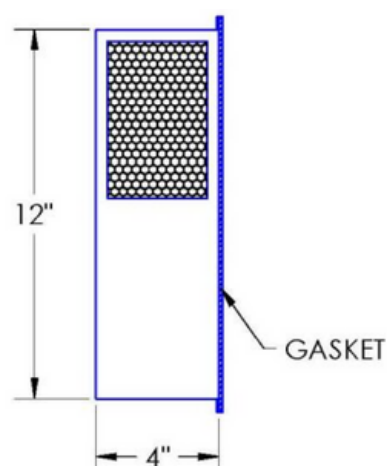
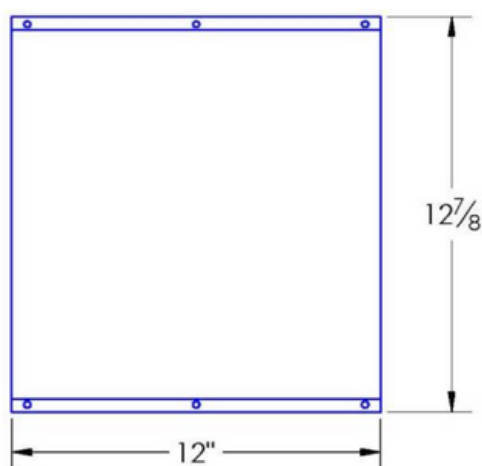


FLUSH-MOUNT- CC254 TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC254F Rated cooling: 330 Watts at 20°C ΔT (16.5 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. A power cord with a 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



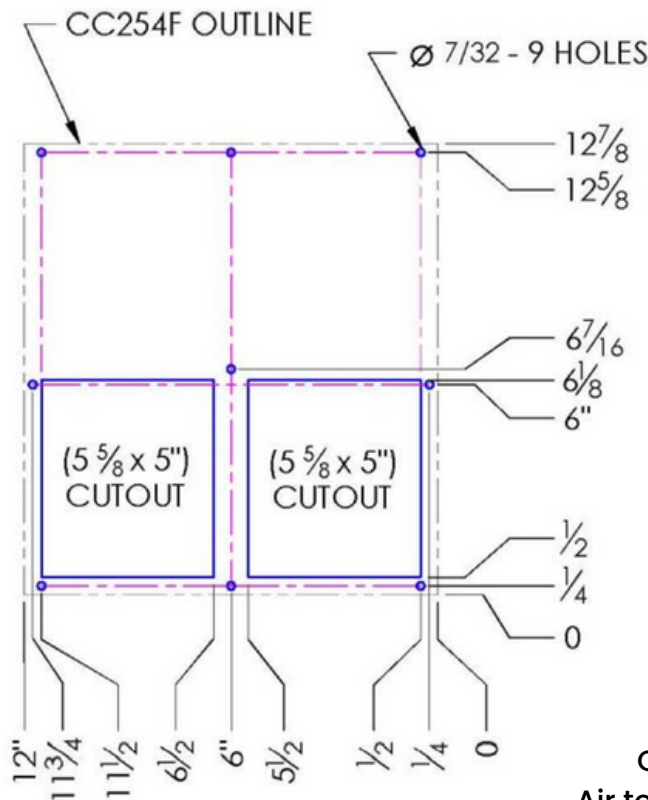
■ HEAT EXCHANGER AIR TO AIR CC254F STAINLESS STEEL



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC254F, SS	13 lbs	1,100	0.4	2x4"	2.8X12X4
Efficiency: 16.5 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN (EXTERNAL VIEW)

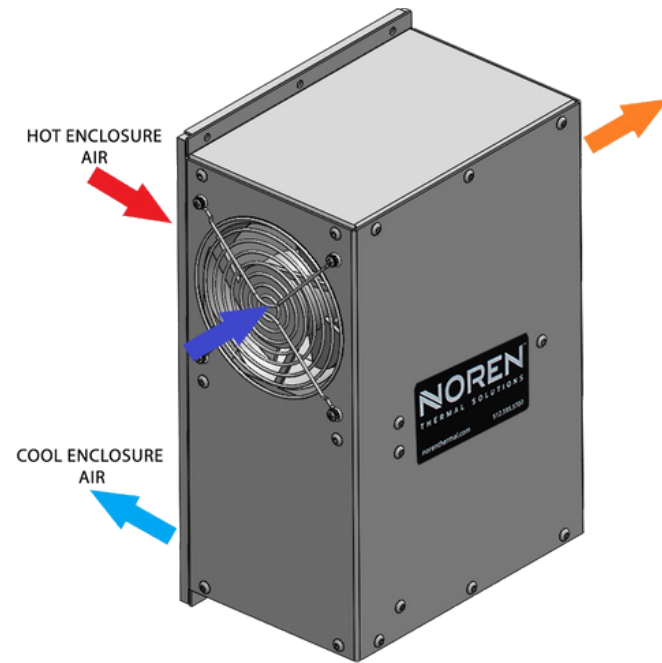


CC254F SS NEMA 4X
Air to Air Flush-Mount Model

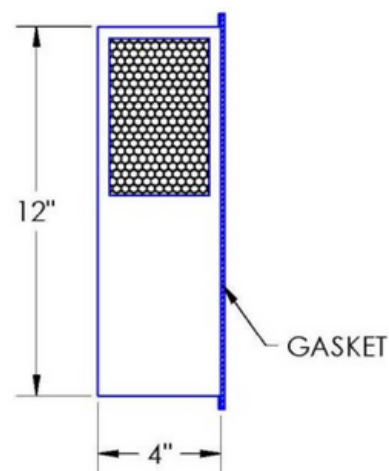
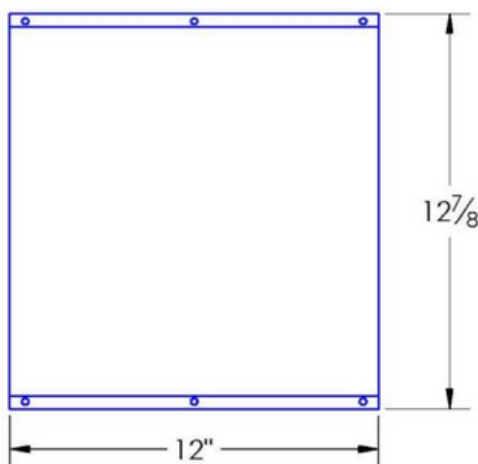


FLUSH-MOUNT - CC254F SS NEMA 4X PRODUCT SPECIFICATIONS

1. For NEMA 4X environments and corrosion-resistant applications
2. CC254F Rated cooling: 330 Watts at 20°C ΔT (16.5 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 or 316 Stainless Steel
5. Equipped with a mounting gasket to maintain the NEMA 4X integrity of your cabinet
6. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans
7. Vertical mounting (as shown) is standard. Call for horizontal applications
8. Optional: Inlet air-filter kit available upon request
9. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)

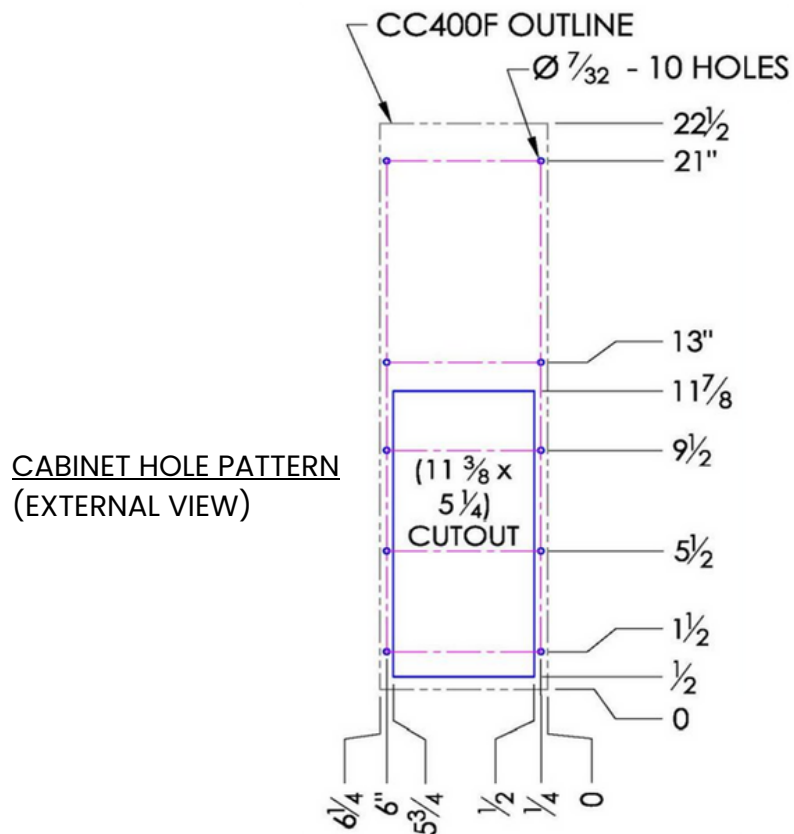


■ HEAT EXCHANGER AIR TO AIR CC400F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC400F	10 lbs	1,400	0.4	2x4"	22.5x6.25x4
Efficiency: 20.4 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

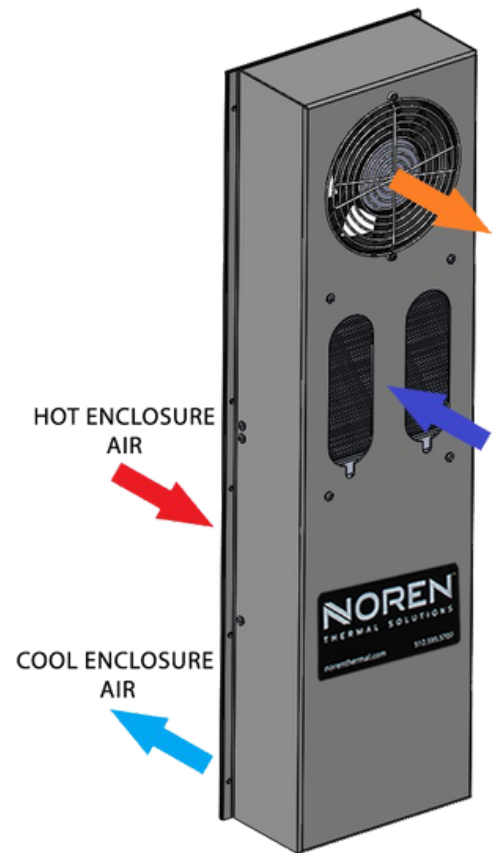


CC400F TYPE 12
Air to Air Flush-Mount Model

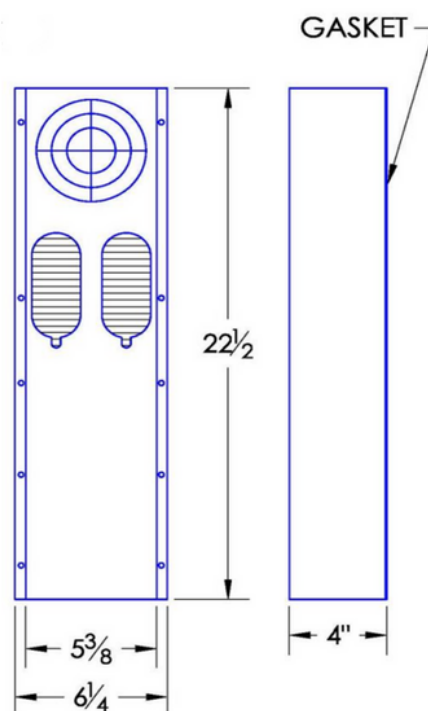


FLUSH-MOUNT - CC400F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC400F Rated cooling: 408 Watts at 20°C ΔT (20.4 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. A power cord with a 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



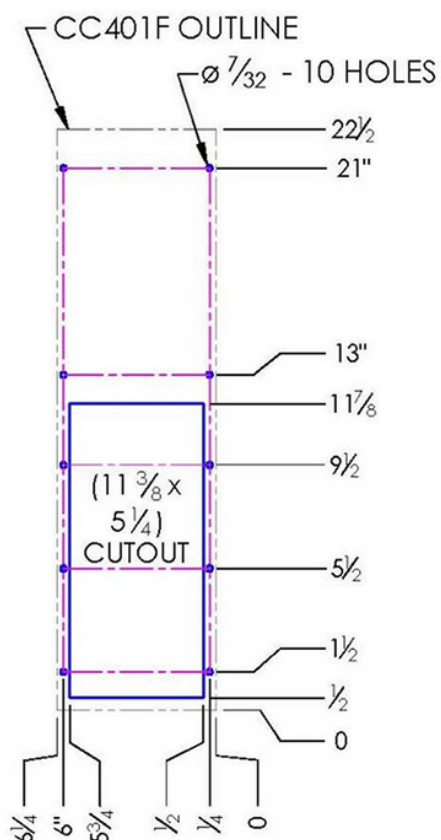
■ HEAT EXCHANGER AIR TO AIR CC401F



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC401F-WL-TYPE 4X	15 lbs	1,400	0.4	2x4"	22.5x6.25x4
Efficiency: 20.4 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

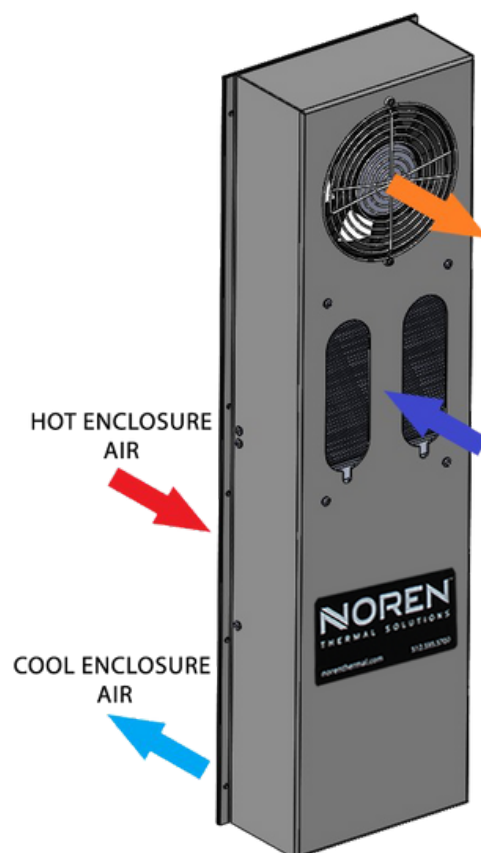


CC401F WL TYPE 4X
Air to Air Flush-Mount Model

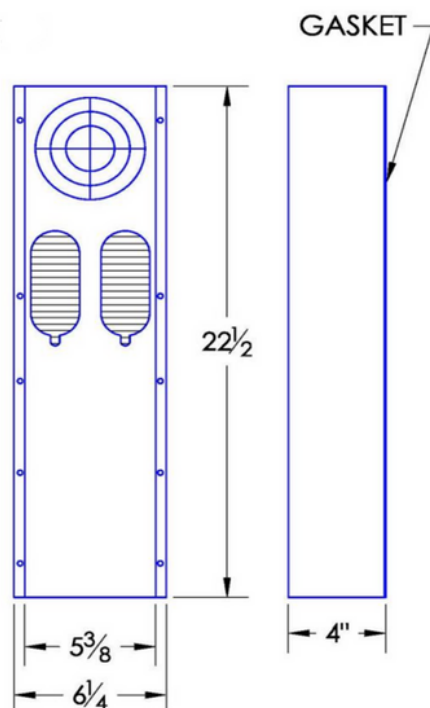


FLUSH-MOUNT - CC401F WL TYPE 4X PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 or 4X environments
2. CC401F Rated cooling: 408 Watts at 20°C ΔT (20.4 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel. (316 SS or powder coated Aluminum optional)
5. Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL)
8. Internal 6-ft. Power cord with 3-prong plug is standard for AC-powered Units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: Inlet air-filter kit available upon request
12. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)

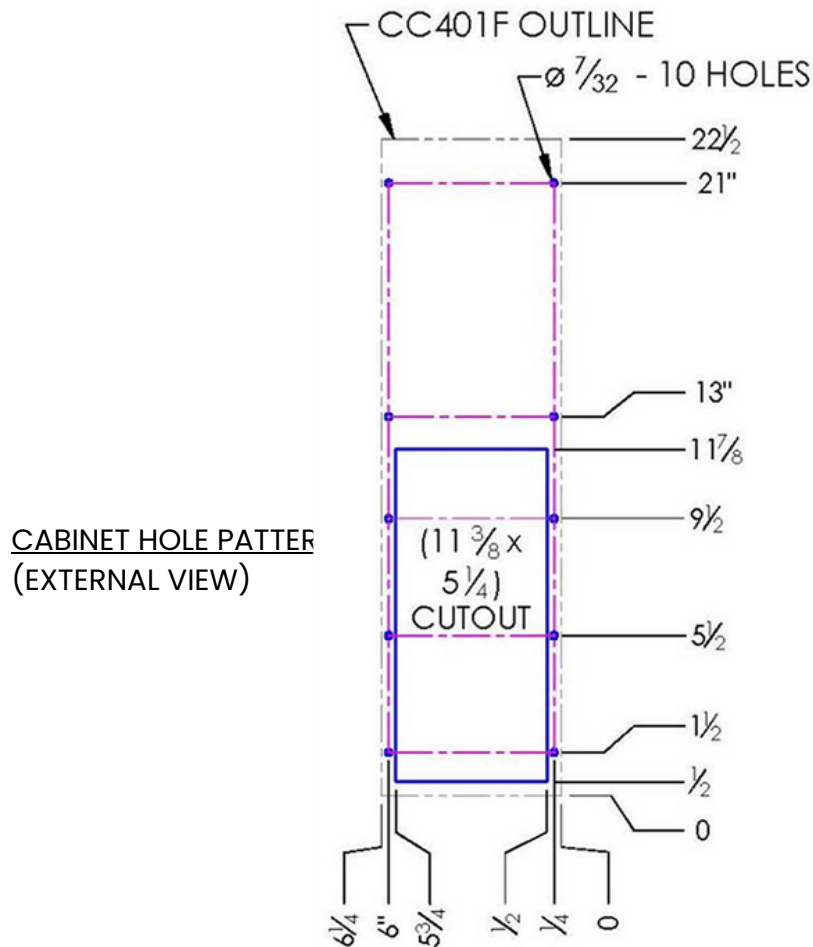


■ HEAT EXCHANGER AIR TO AIR CC401F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC401F-WL-TYPE 4	10 lbs	1,400	0.4	2x4"	22.5x6.25x4
Efficiency: 20.4 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

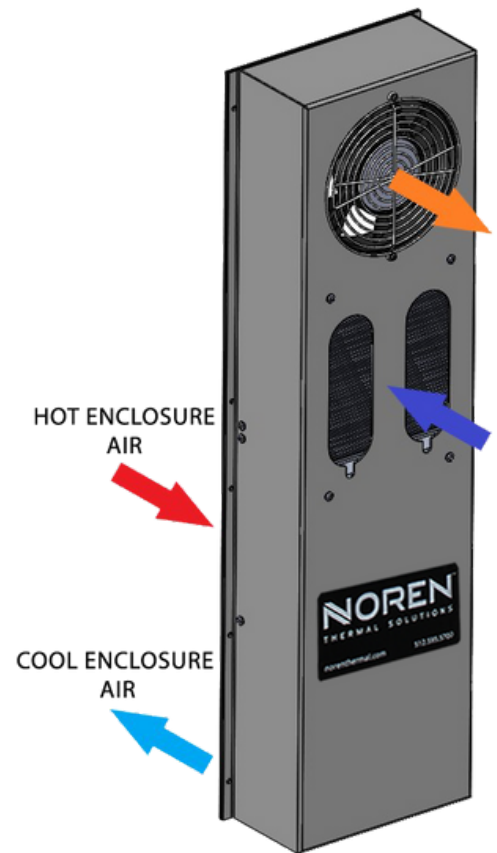


CC401F WL TYPE 4
Air to Air Flush-Mount Model

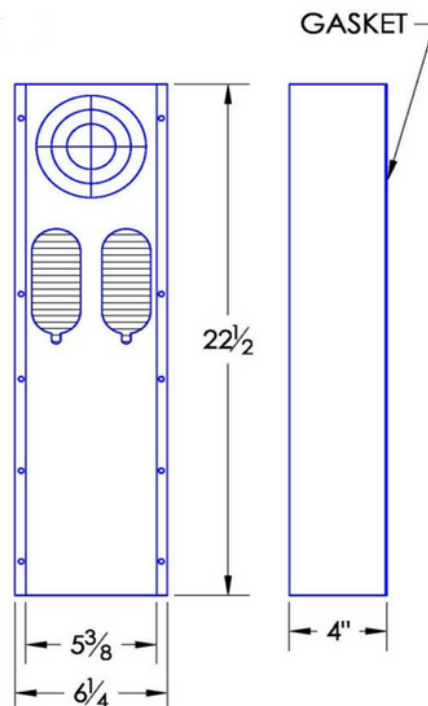


FLUSH-MOUNT - CC401F WL TYPE 4 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 environments
2. CC400F Rated cooling: 408 Watts at 20°C ΔT (20.4 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available (TYPE 4X)
5. Equipped with a mounting gasket to maintain the TYPE 4 integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL). This new fan is the Noren Universal Fan (UF)
8. Internal 6-ft. Power cord with 3-prong plug is standard for AC-powered Units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: Inlet air-filter kit available upon request
12. For design, quote, and sizing assistance:
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DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC401F WITH RAIN HOOD

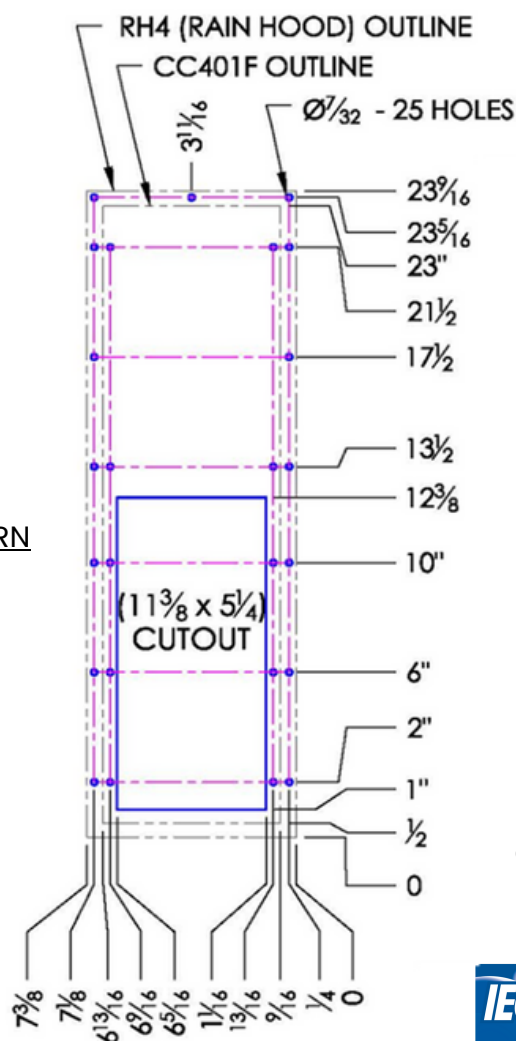


Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC401F-RH4	14 lbs	1,400	0.4	2x4"	23.5x7.38x10

Efficiency: 20.4 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

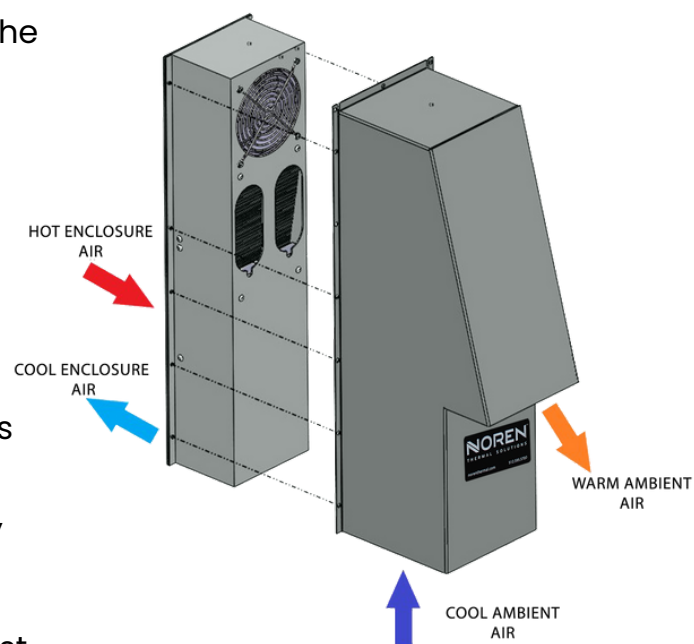


CC401F RH4 & CC401F WL* RH4
Air to Air Flush-Mount Model

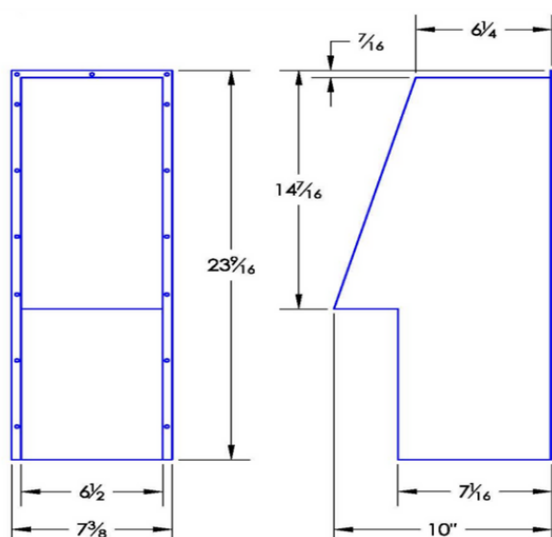


FLUSH-MOUNT - CC401F WL* RH4 PRODUCT SPECIFICATIONS

1. Unit and options are UL Listed (SA9567)
2. For NEMA / TYPE 3R or 4 applications (OUTDOOR USE)
3. Equipped with a mounting gasket to maintain the NEMA / TYPE 3R or 4 integrity of the customer's cabinet
4. Pressure tested to ensure a liquid-tight seal
5. *Optional "WET LOCATION FAN" (WL) is required for any "HOSE DOWN" application
6. Cabinet Cooler with hood design for surface mounting on the outside of the cabinet
7. Housing is aluminum (Standard color). Stainless steel is available
8. Rated cooling: 408 Watts at 20°C ΔT (20.4 W/°C, mounted to an uninsulated 24" X 24" X 16" cabinet)
9. Optional: Inlet air-filter kit available upon request
10. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC version includes a junction box; consult the website
11. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



MOUNTING INFORMATION:

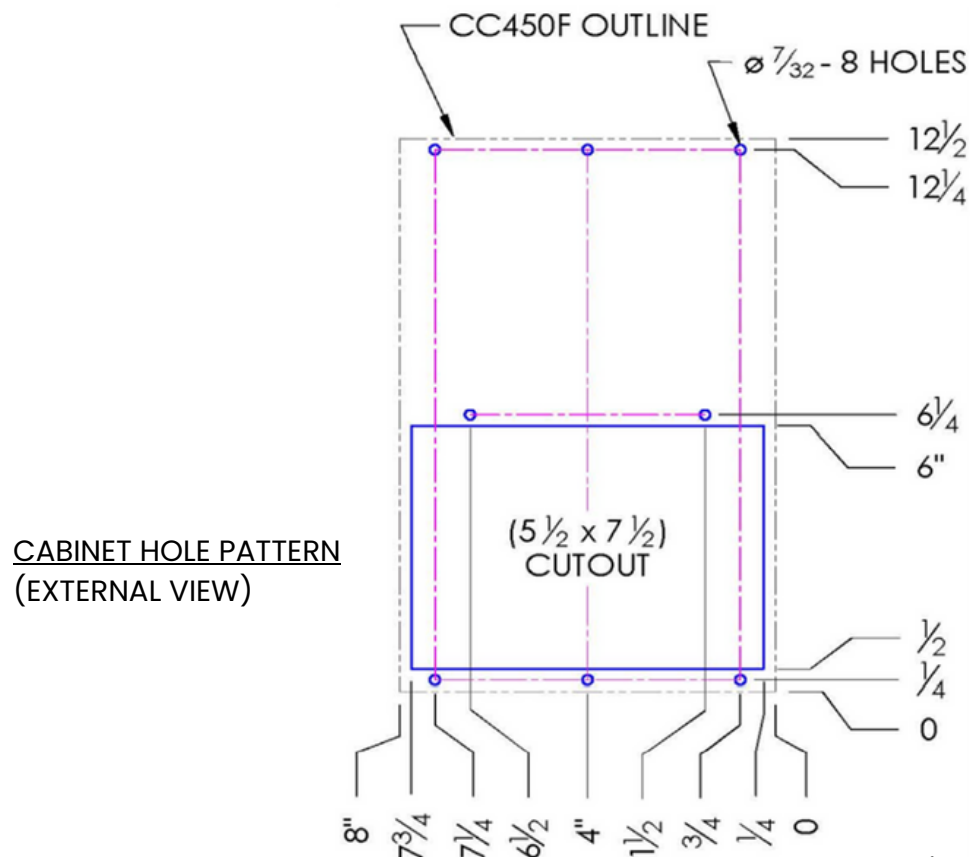
THE BOTTOM OF THE HOOD (AIR INLET) MUST BE AT LEAST 6" ABOVE THE FLOOR OR A HORIZONTAL SURFACE. MOUNTING FASTENERS ARE PROVIDED (8-32 x 3/4" STAINLESS STEEL SCREWS & NUTS). SEALING WASHERS ARE PROVIDED FOR SEALING MOUNTING FASTENERS INSIDE YOUR ENCLOSURE.

■ HEAT EXCHANGER AIR TO AIR CC450F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC450F	9 lbs	1,400	0.4	2x4"	12.5x8x5.3
Efficiency: 21.0 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

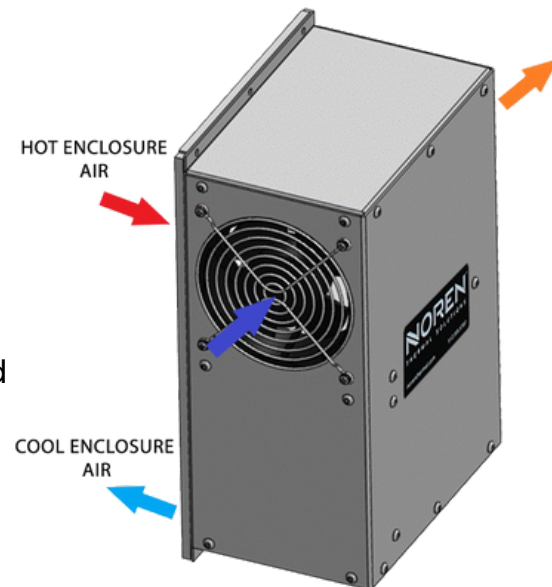


CC450F TYPE 12
Air to Air Flush-Mount Model

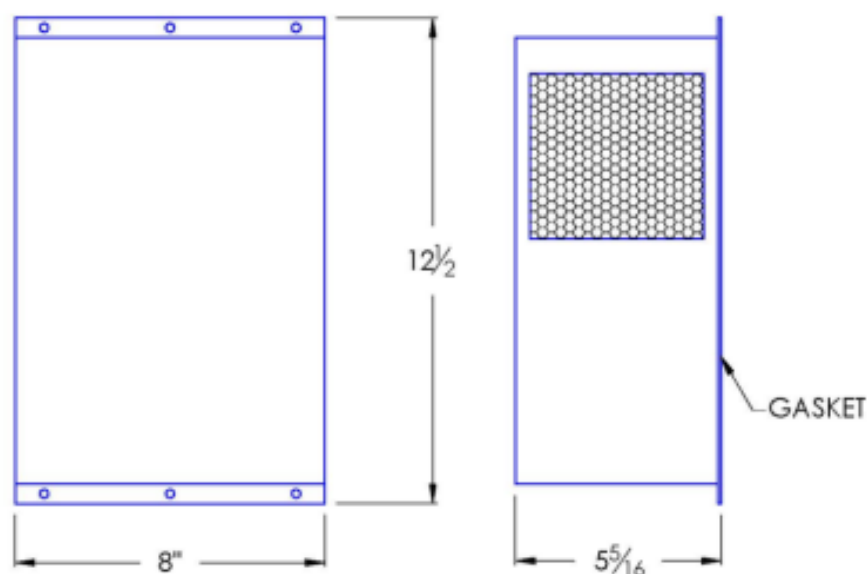


FLUSH-MOUNT - CC450F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC450F Rated cooling: 420 Watts at 20°C ΔT (21.0 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless Steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. Power cord with 3-prong plug is standard for AC-powered Units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC version includes a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: Inlet air-filter kit available upon request
10. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC450F STAINLESS STEEL

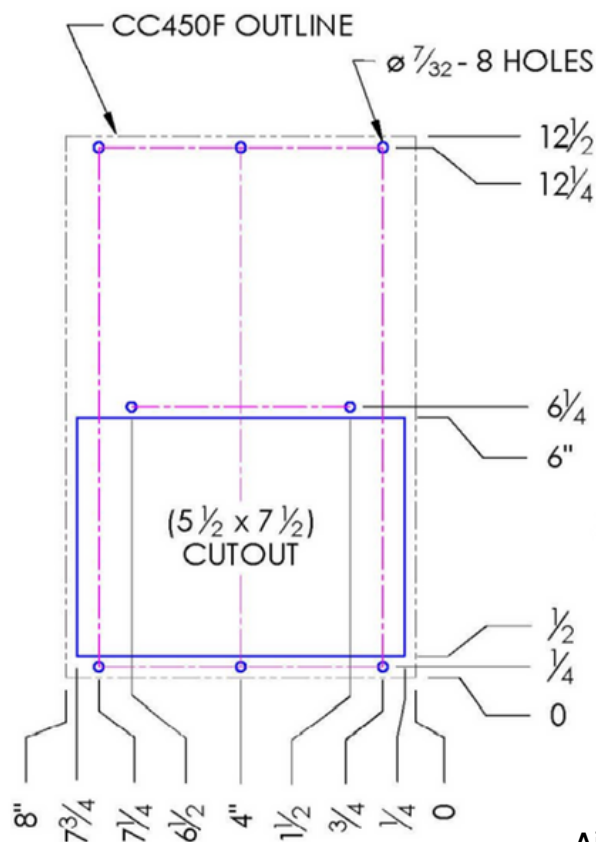


Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC450F,SS	13 lbs	1,400	0.4	2x4"	12.5x8x5.3

Efficiency: 21.0 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

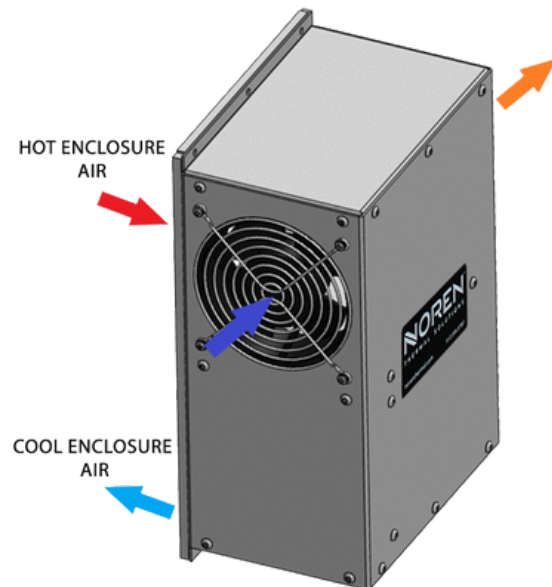


CC450F SS NEMA 4X
Air to Air Flush-Mount Model

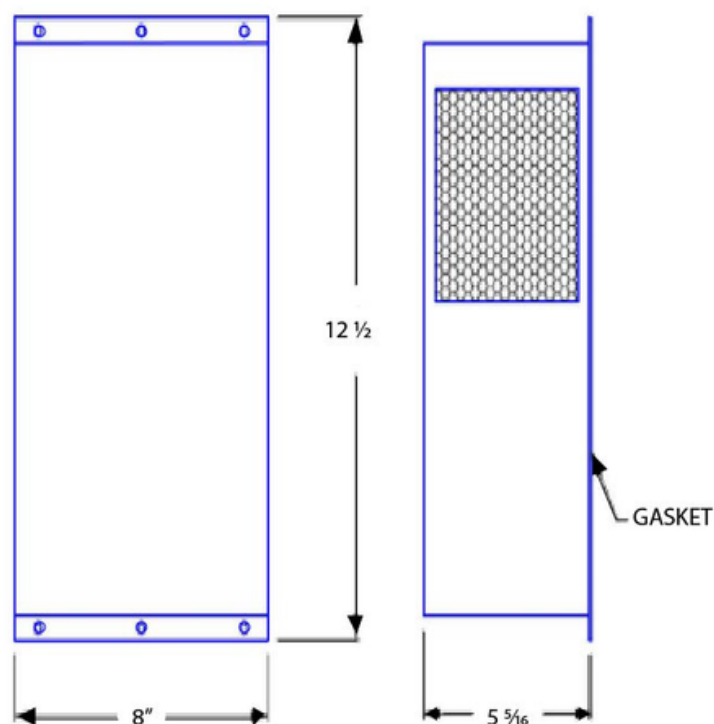


FLUSH-MOUNT - CC450F SS NEMA 4X PRODUCT SPECIFICATIONS

1. For NEMA 4X environments and corrosion-resistant applications
2. CC450F Rated cooling: 420 Watts at 20°C ΔT (21.0 W/°C, mounted to an uninsulated 24" X 24" X 16" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel (316 SS is special order)
5. Equipped with a mounting gasket to maintain the NEMA 4X integrity of your cabinet
6. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans
7. Vertical mounting (as shown) is standard. Call for horizontal applications
8. Optional: Inlet air-filter kit available upon request
9. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



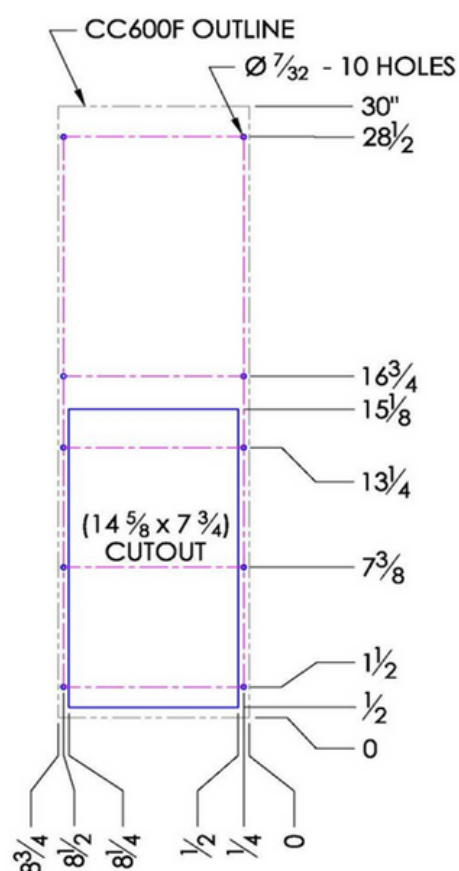
■ HEAT EXCHANGER AIR TO AIR CC600F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC600F	14 lbs	3,300	0.6	2x6"	30x8.75x4
Efficiency: 49.4 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

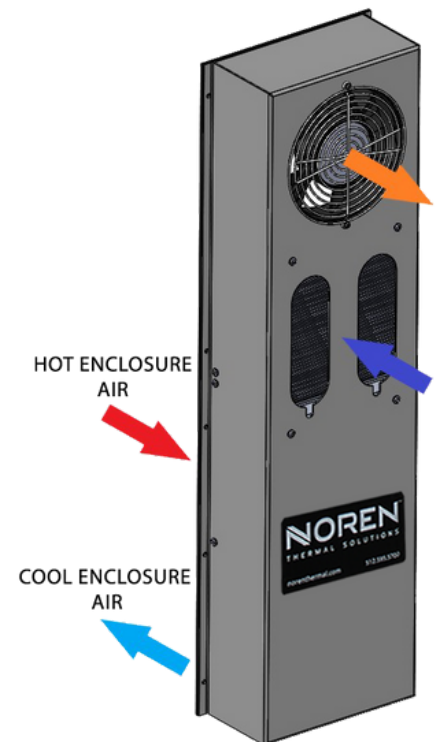


CC600F TYPE 12
Air to Air Flush-Mount Model

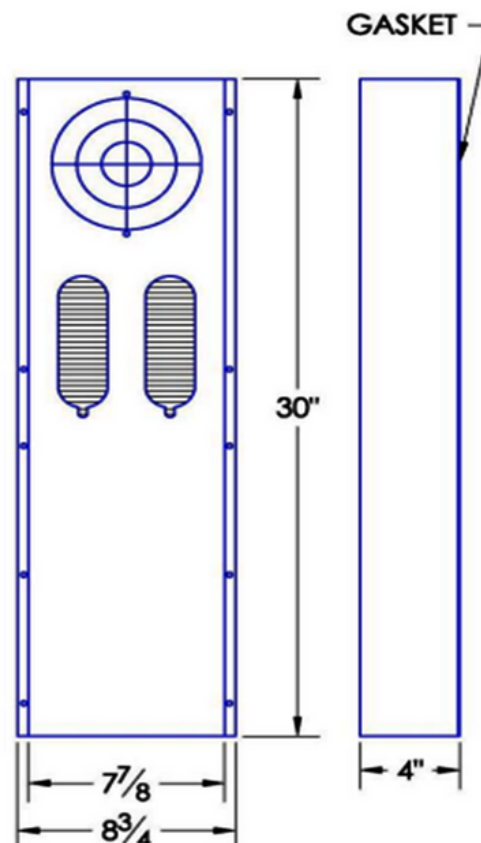


FLUSH-MOUNT - CC600F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC600F Rated cooling: 988 Watts at 20°C ΔT (49.4 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless Steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC version includes a junction box, consult the website
7. Vertical mounting
8. Optional: Inlet air-filter kit available upon request
9. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



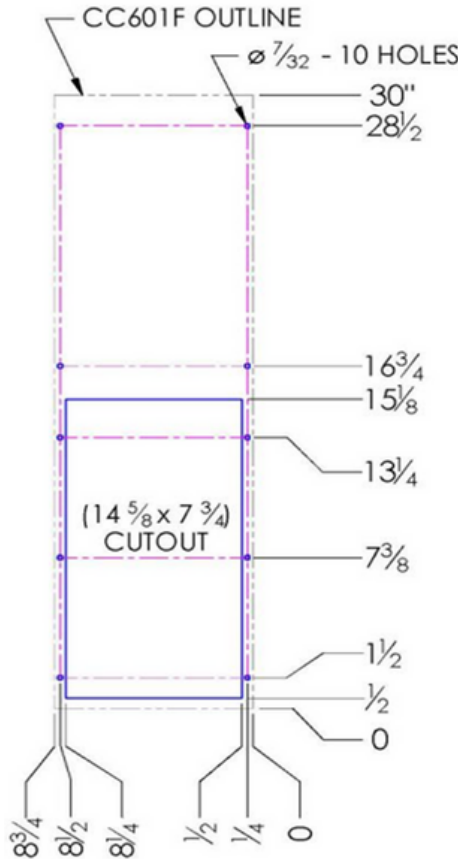
■ HEAT EXCHANGER AIR TO AIR CC601F



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC601F-WL-TYPE 4X	23 lbs	3,300	0.6	2x6"	30x8.75x4
Efficiency: 49.4 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

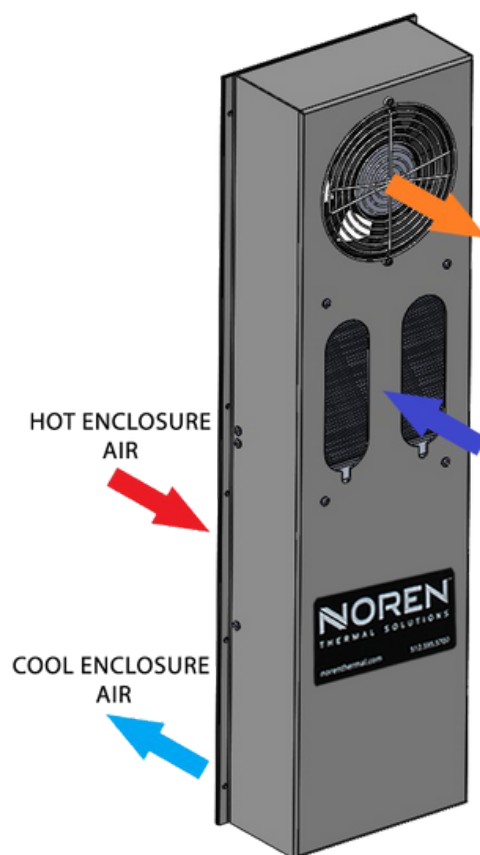


CC601F WL TYPE 4X
Air to Air Flush-Mount Model

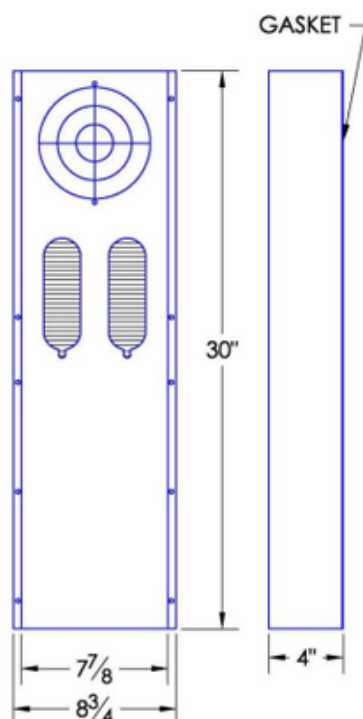


FLUSH-MOUNT - CC601F WL TYPE 4X PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 or 4X environments
2. CC601F Rated cooling: 988 Watts at 20°C ΔT (49.4 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel. (316 SS or powder coated Aluminum optional)
5. Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet
6. Pressure tested to ensure liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL)
8. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered Units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC version includes a junction box, consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: Inlet air-filter kit available upon request
12. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC601F

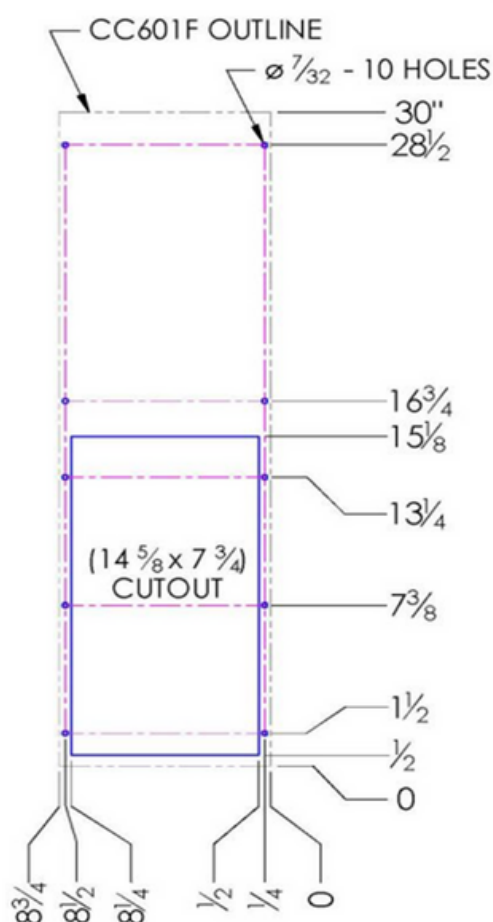


Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC601F-WL-TYPE 4	14 lbs	3,300	0.6	2x6"	30x8.75x4

Efficiency: 49.4 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

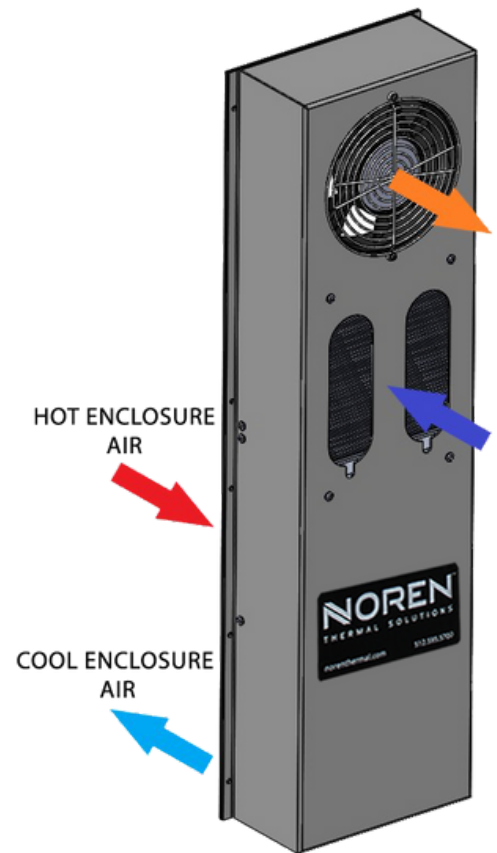


CC601F WL TYPE 4
Air to Air Flush-Mount Model

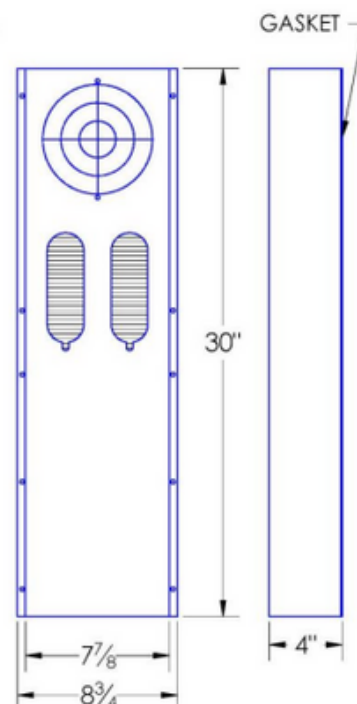


FLUSH-MOUNT - CC601F WL TYPE 4 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 environments
2. CC601F Rated cooling: 988 Watts at 20°C ΔT (49.4 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless Steel is available (TYPE 4X)
5. Equipped with a mounting gasket to maintain the TYPE 4 integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL). This new fan is the Noren Universal Fan (UF)
8. Internal 6-ft. Power cord with 3-prong plug is standard for AC-powered Units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: Inlet air-filter kit available upon request
12. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



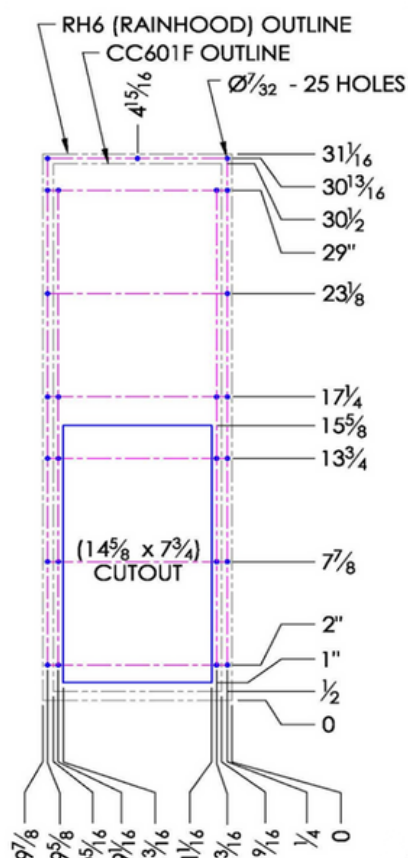
■ HEAT EXCHANGER AIR TO AIR CC601F WITH RAIN HOOD



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC601F-RH6	20 lbs	3,300	0.98	2x6"	31.06x9.88x10
Efficiency: 48.4 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

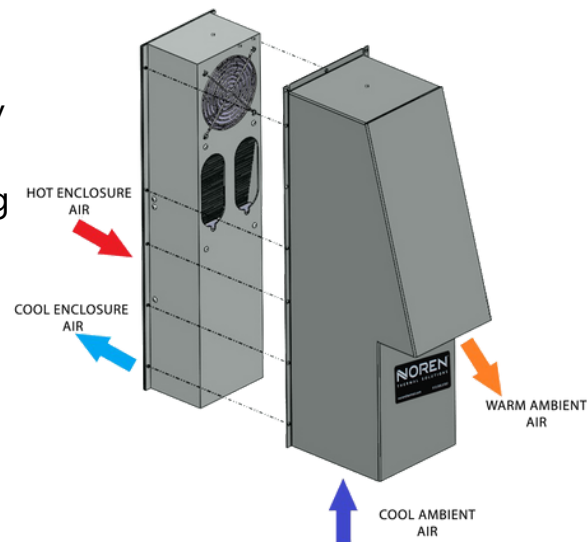


CC601F RH6 & CC601F WL* RH6
Air to Air Flush-Mount Model

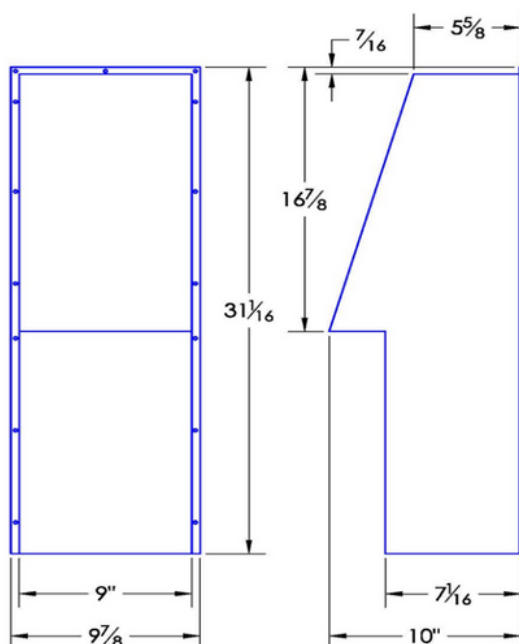


FLUSH-MOUNT - CC601F WL* RH6 PRODUCT SPECIFICATIONS

1. Unit and options are UL Listed (SA9567)
2. For NEMA / TYPE 3R or 4 applications (OUTDOOR USE)
3. Equipped with a mounting gasket to maintain the NEMA / TYPE 3R or 4 integrity or the customer's cabinet
4. Pressure tested to ensure a liquid-tight seal
5. *Optional "WET LOCATION FAN" (WL) is required for any "HOSE DOWN" application
6. Cabinet Cooler with hood design for surface mounting on the outside of the cabinet
7. Housing is aluminum (Standard color). Stainless Steel is available
8. Rated cooling: 968 Watts at 20°C ΔT (48.4 W/°C, mounted to an uninsulated 72" X 36" X 24" cabinet)
9. Optional: Inlet air-filter kit available upon request
10. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box, consult the website
11. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



MOUNTING INFORMATION:

THE BOTTOM OF THE HOOD (AIR INLET) MUST BE AT LEAST 6" ABOVE THE FLOOR OR A HORIZONTAL SURFACE. MOUNTING FASTENERS ARE PROVIDED (8-32 x 3/4" STAINLESS STEEL SCREWS & NUTS). SEALING WASHERS ARE PROVIDED FOR SEALING MOUNTING FASTENERS INSIDE YOUR ENCLOSURE.

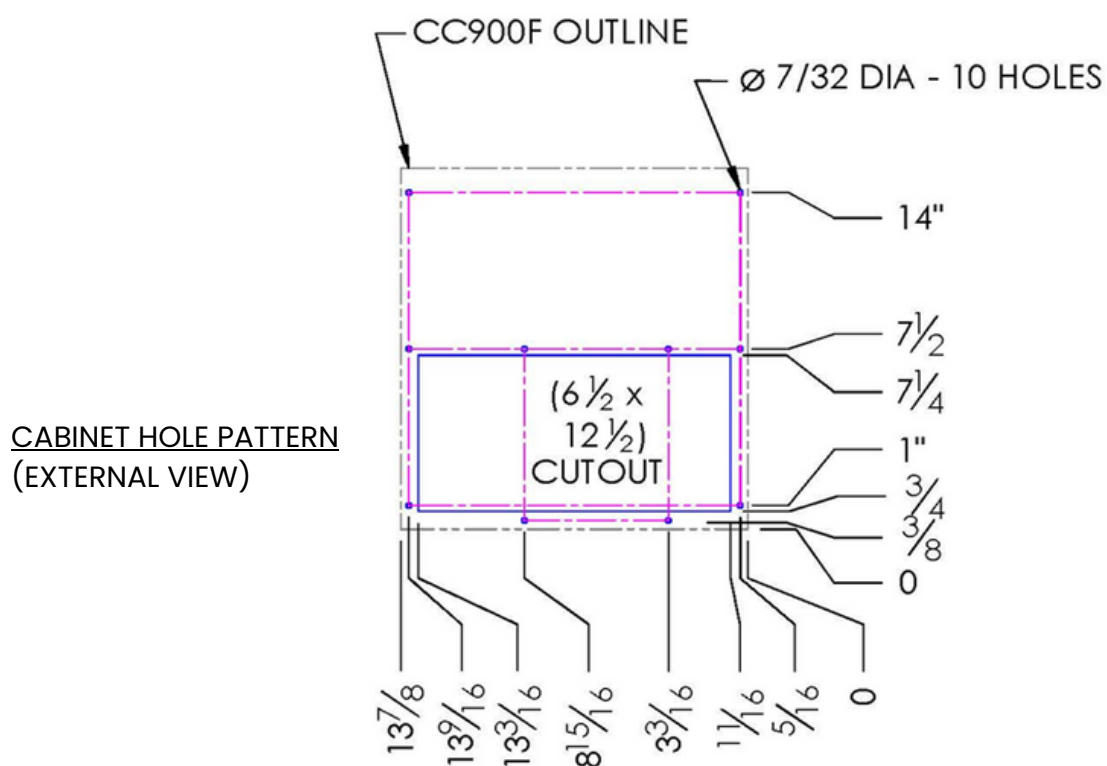
■ HEAT EXCHANGER AIR TO AIR CC900F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC900F	16 lbs	4,500	0.6	2x6"	15x13.8x7.8

Efficiency: 66.0 Watts/°C ΔT based on average internal cabinet temperature



CUT OUT AND HOLE PATTERN (INCHES)

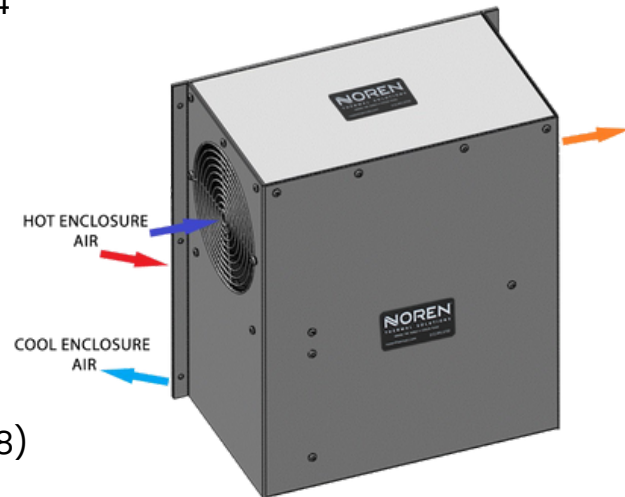


CC900 TYPE 12
Air to Air Flush-Mount Model

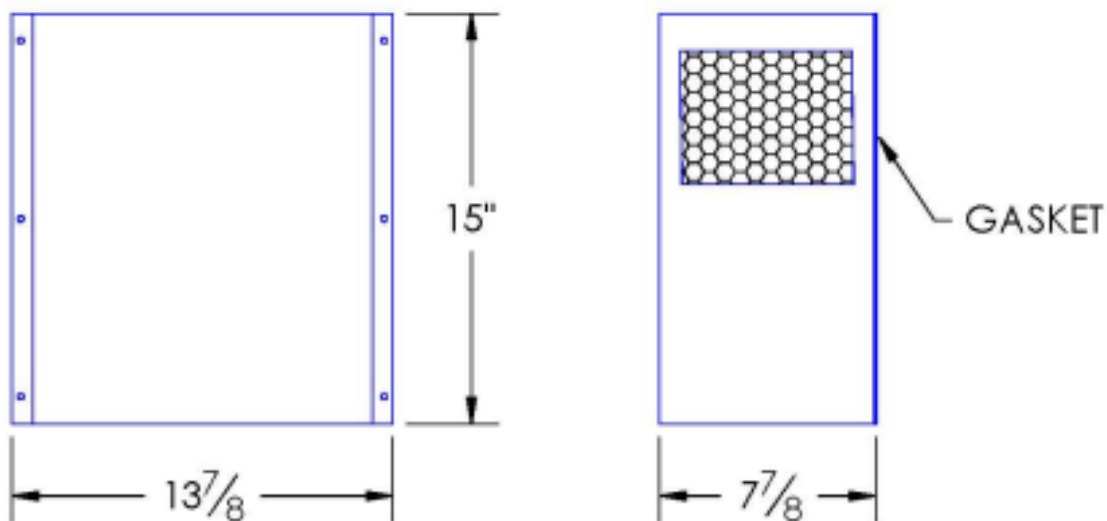


FLUSH-MOUNT - CC900F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC900F Rated cooling: 1,320 Watts at 20°C ΔT (66.0W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



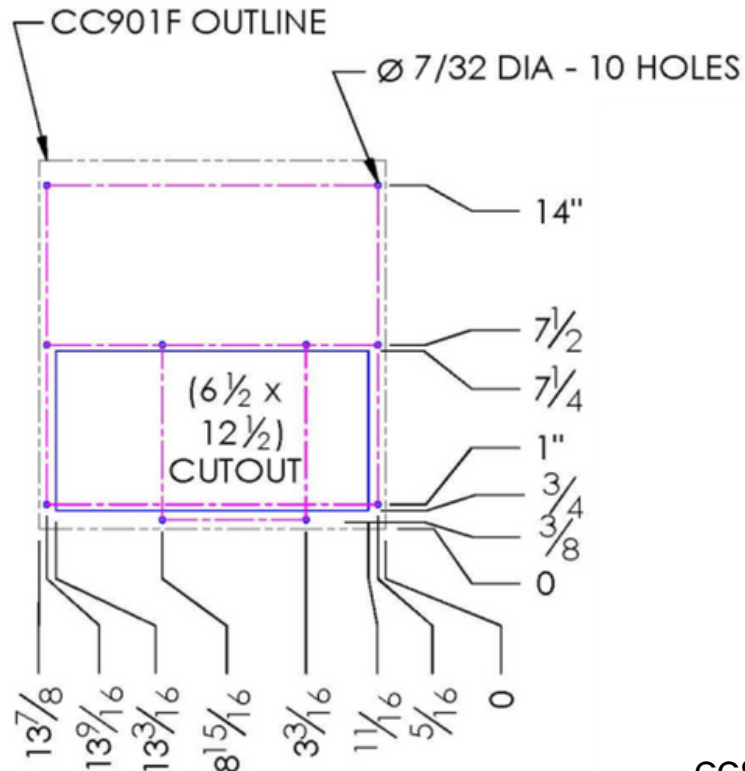
■ HEAT EXCHANGER AIR TO AIR CC901F



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC901F-WL-TYPE 4X	30 lbs	4,500	0.6	2x6"	15x13.8x7.8
Efficiency: 66.0 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)



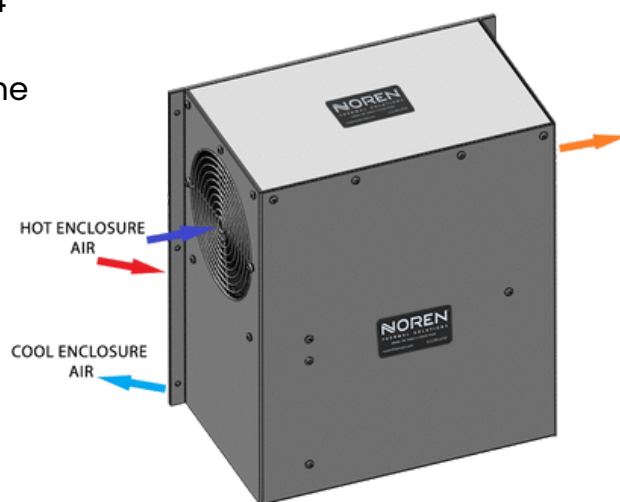
CC901 WL TYPE 4X
Air to Air Flush-Mount Model



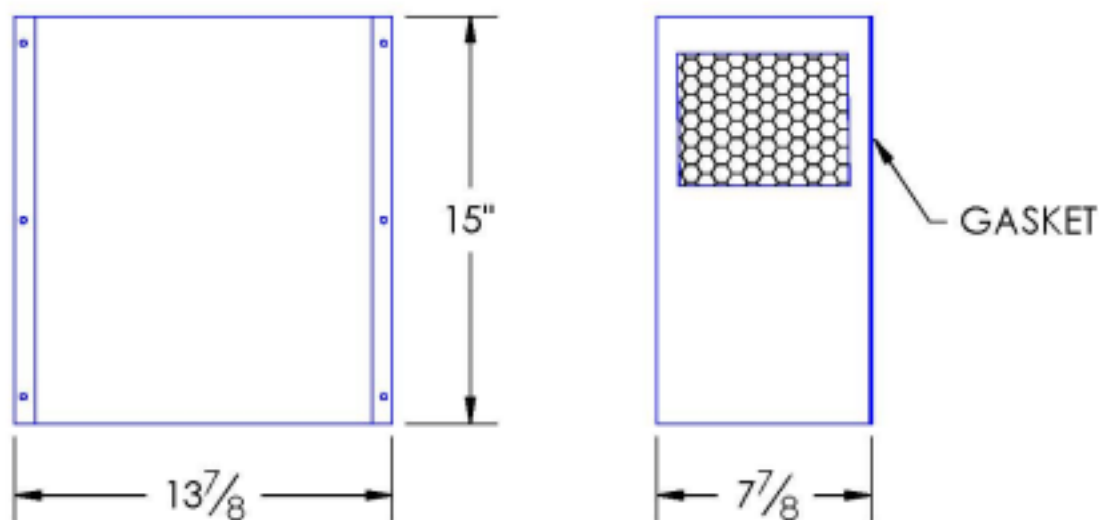
UL File #SA9567

FLUSH-MOUNT - CC901F WL TYPE 4X PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 or 4X environments
2. CC901F Rated cooling: 1,320 Watts at 20°C ΔT (66.0 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel. (316 SS or powder coated Aluminum optional)
5. Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL)
8. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: inlet air-filter kit available upon request
12. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC901F

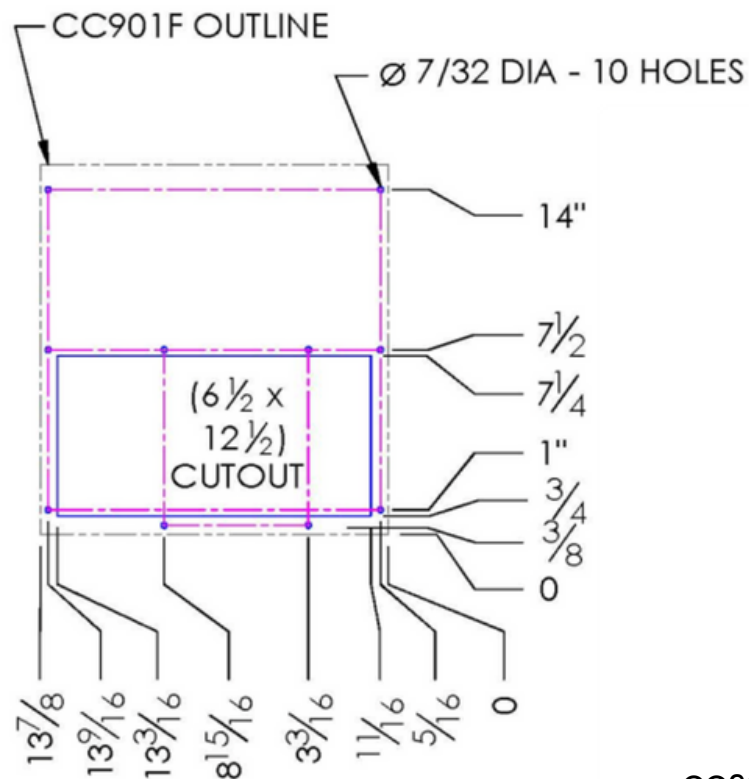
Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC901F-WL-TYPE 4	16 lbs	4,500	0.6	2x6"	15x13.8x7.8

Efficiency: 66.0 Watts/°C ΔT based on average internal cabinet temperature



CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)



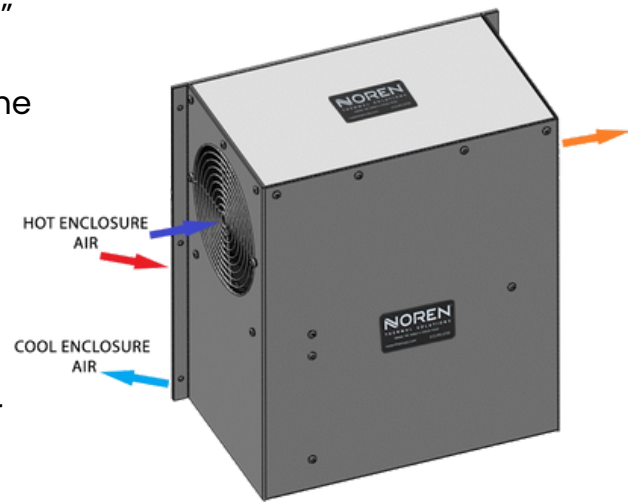
CC901 WL TYPE 4
Air to Air Flush-Mount Model



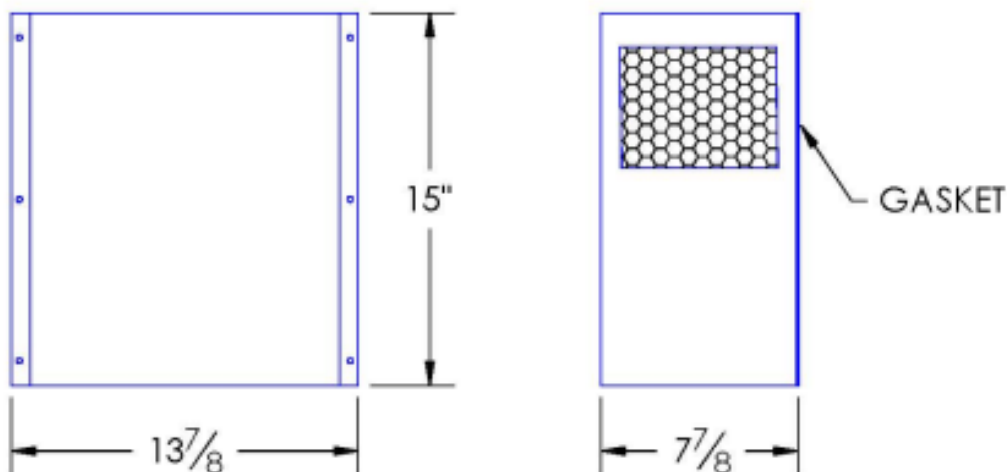
UL File #SA9567

FLUSH-MOUNT - CC901F WL TYPE 4 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 environments
2. CC901F Rated cooling: 1,320 Watts at 20°C ΔT (66.0 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available (TYPE 4X)
5. Equipped with a mounting gasket to maintain the TYPE 4 integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL)
8. This new fan is the Noren Universal Fan (UF)
Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: inlet air-filter kit available upon request
12. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



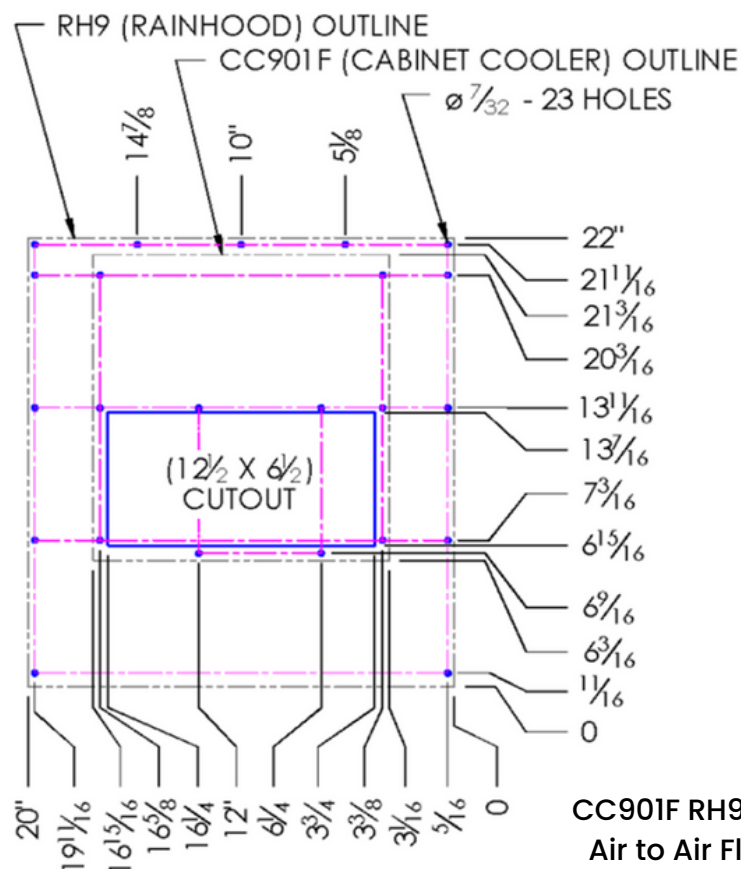
■ HEAT EXCHANGER AIR TO AIR CC901F WITH RAIN HOOD MODEL



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC901F-RH9	23 lbs	4,280	0.98	2x6"	22x20x8
Efficiency: 62.7 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

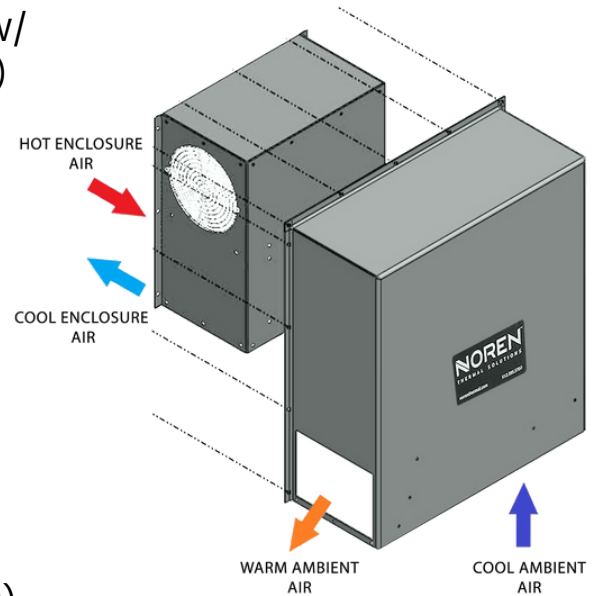


CC901F RH9 & CC901F WL* RH9
Air to Air Flush-Mount Model

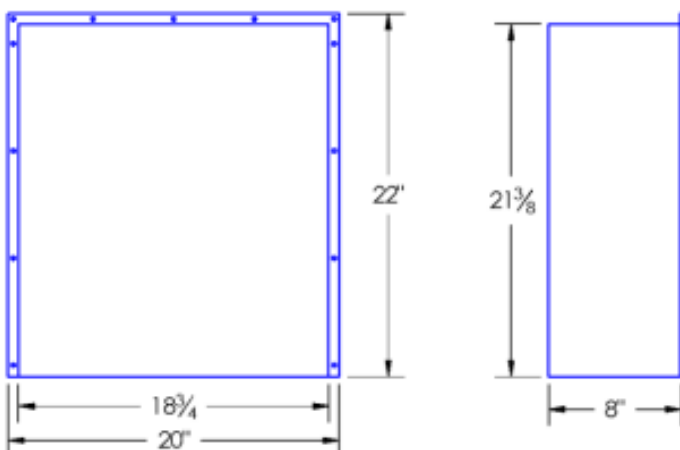


FLUSH-MOUNT - CC901F WL* RH9 PRODUCT SPECIFICATIONS

1. Unit and options are UL Listed (SA9567) for TYPE 3R or TYPE 4 environments
2. CC901F Rated cooling: 1,254 Watts at 20°C ΔT (62.7 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Cabinet cooler with hood design for surface mounting on the outside of the cabinet
4. Housing and hood are aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain the NEMA / TYPE 3R or 4 integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. *Optional "WET LOCATION FAN" (-WL) is required for TYPE 4 (HOSE DOWN)
8. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans.
10. DC-powered units include a junction box; consult the website
11. For Vertical mounting only (as shown)
12. Optional: inlet air-filter kit available upon request
13. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



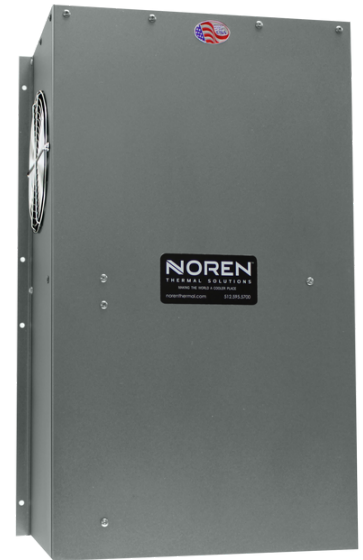
MOUNTING INFORMATION:

THE BOTTOM OF THE HOOD (AIR INLET) MUST BE AT LEAST 6" ABOVE THE FLOOR OR A HORIZONTAL SURFACE. MOUNTING FASTENERS ARE PROVIDED (8-32 x 3/4" STAINLESS STEEL SCREWS & NUTS). SEALING WASHERS ARE PROVIDED FOR SEALING MOUNTING FASTENERS INSIDE YOUR ENCLOSURE.

■ HEAT EXCHANGER AIR TO AIR CC1300F

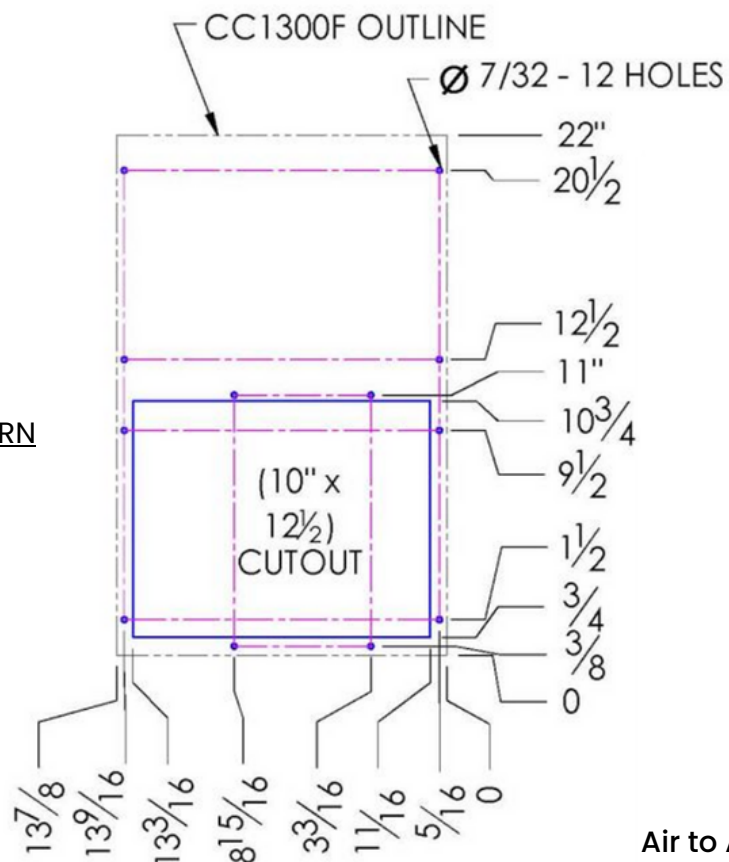
Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC1300F	22 lbs	5,100	0.6	2x6"	22x13.8x7.8

Efficiency: 75.0 Watts/°C ΔT based on average internal cabinet temperature



CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

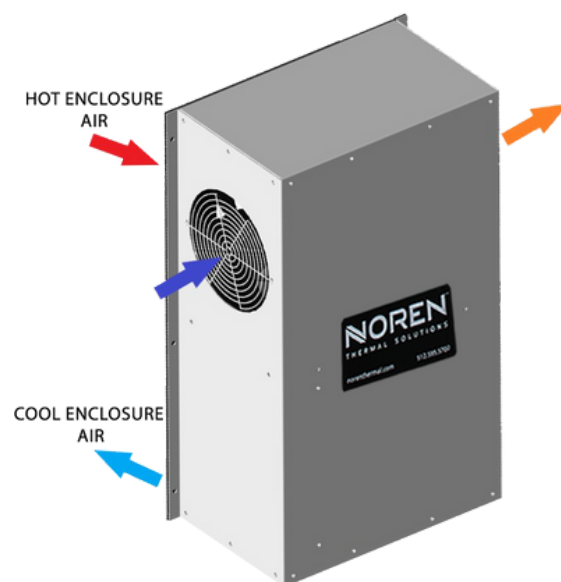


CC1300F TYPE 12
Air to Air Flush-Mount Model

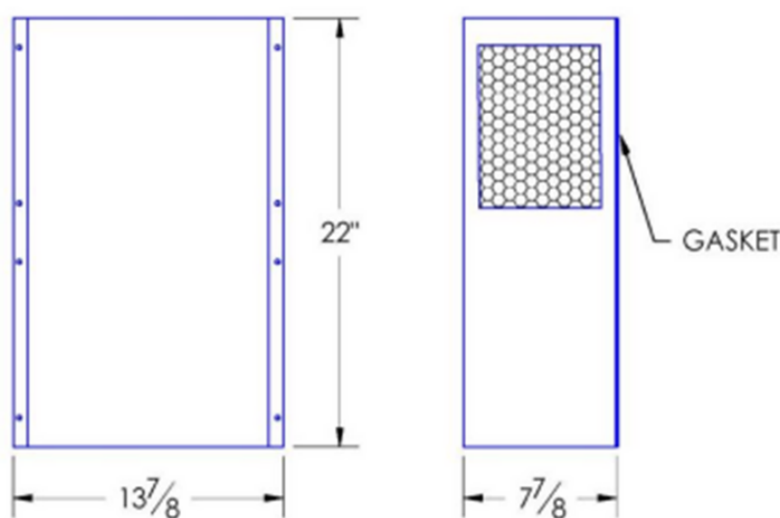


FLUSH-MOUNT - CC1300F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC1300F Rated cooling: 1,500 Watts at 20°C ΔT (75.0 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
8. Unit may be mounted vertically (as shown)
9. Optional: inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



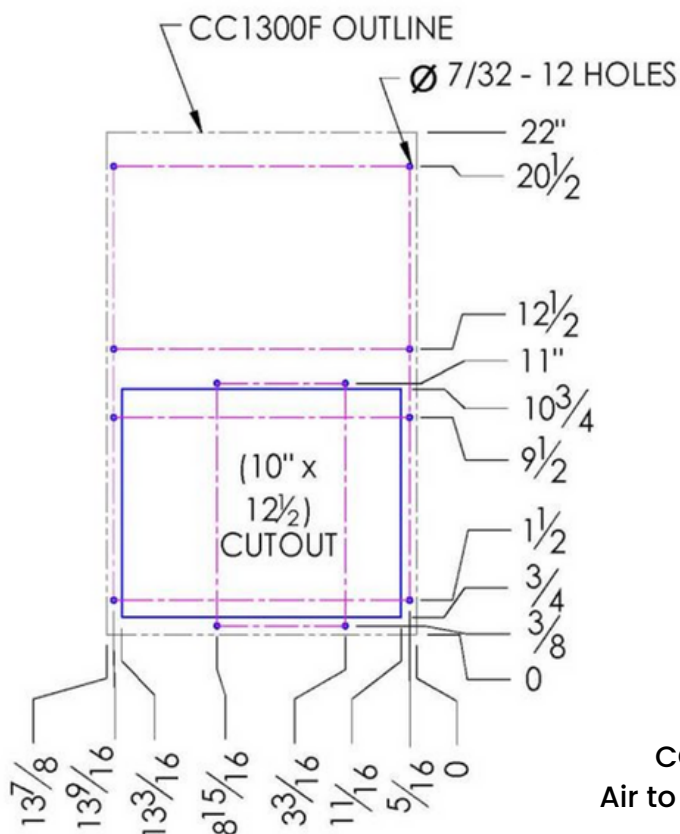
■ HEAT EXCHANGER AIR TO AIR CC1300F STAINLESS STEEL



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC1300F,SS	40 lbs	5,100	0.6	2x6"	22x13.8x7.8
Efficiency: 75.0 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

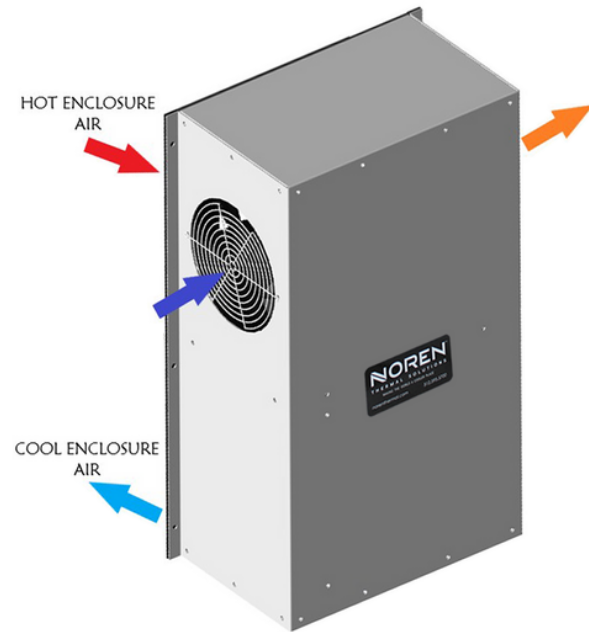


CC1300F SS NEMA 4X
Air to Air Flush-Mount Model

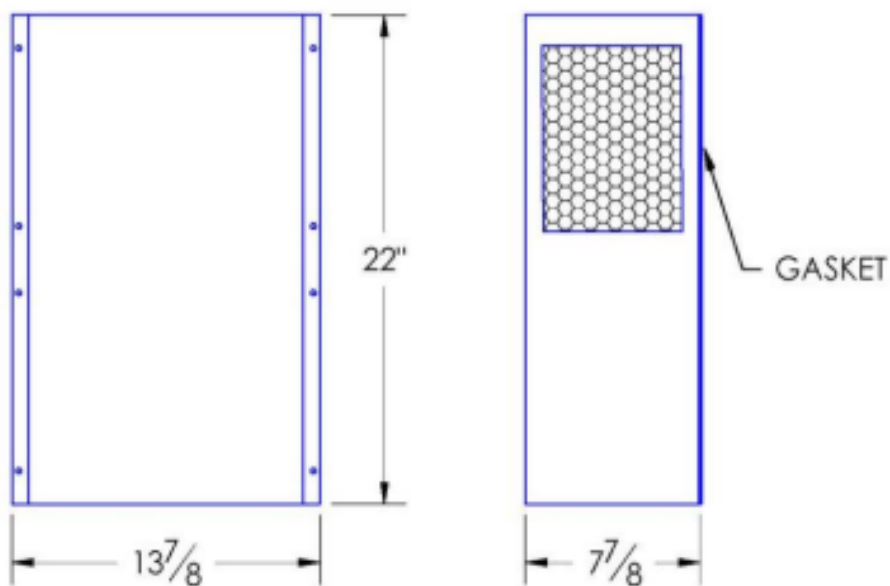


FLUSH-MOUNT - CC1300F SS NEMA 4X PRODUCT SPECIFICATIONS

1. For NEMA 4X environments and corrosion-resistant applications
2. CC1300F Rated cooling: 1,500 Watts at 20°C ΔT (75.0 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel. (316 SS is special order)
5. Equipped with a mounting gasket to maintain the NEMA 4X integrity of your cabinet
6. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans
7. Vertical mounting (as shown) is standard. Call for horizontal applications
8. Optional: inlet air-filter kit available upon request
9. For design, quote, and sizing assistance:
call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



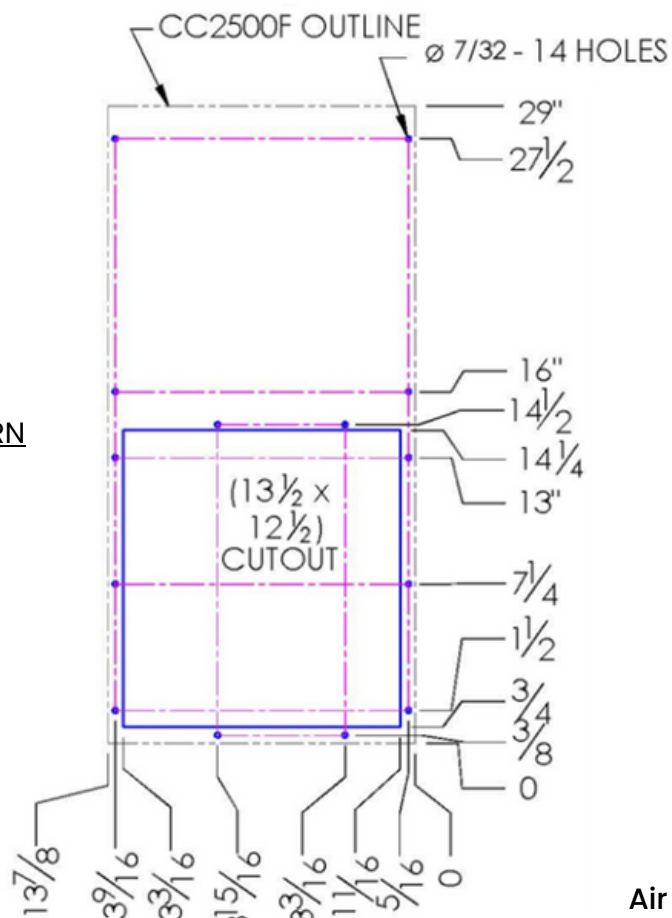
■ HEAT EXCHANGER AIR TO AIR CC2500F

Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC2500F	30 lbs	7,100	1.2	4x6"	29x13.8x7.8
Efficiency: 104.0 Watts/°C ΔT based on average internal cabinet temperature					



CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

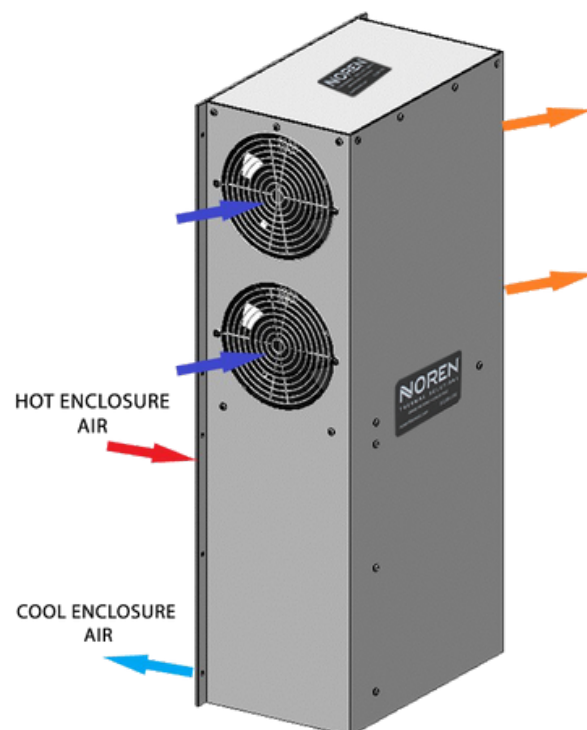


CC2500F TYPE 12
Air to Air Flush-Mount Model

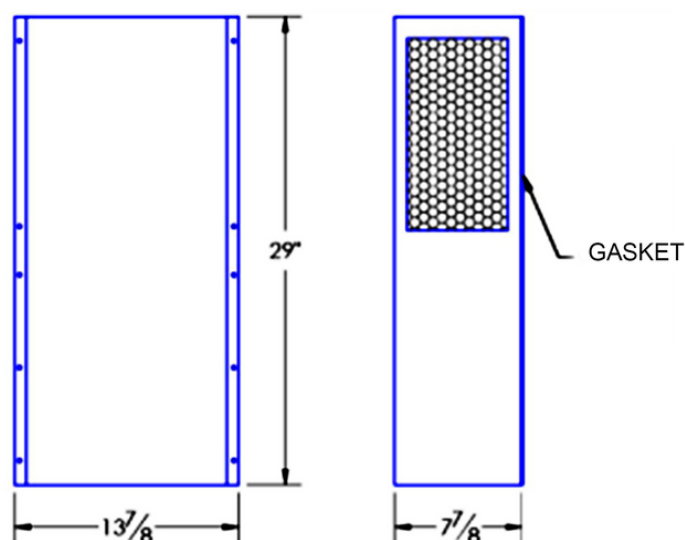


FLUSH-MOUNT - CC2500F TYPE 12 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC2500F Rated cooling: 2,080 Watts at 20°C ΔT (104.0 W/°C, mounted to an uninsulated 72" X 36" X 24" Cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
7. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans DC powered units include junction box, consult website
8. Unit may be mounted vertically (as shown)
9. Optional: inlet air-filter kit available upon request
10. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



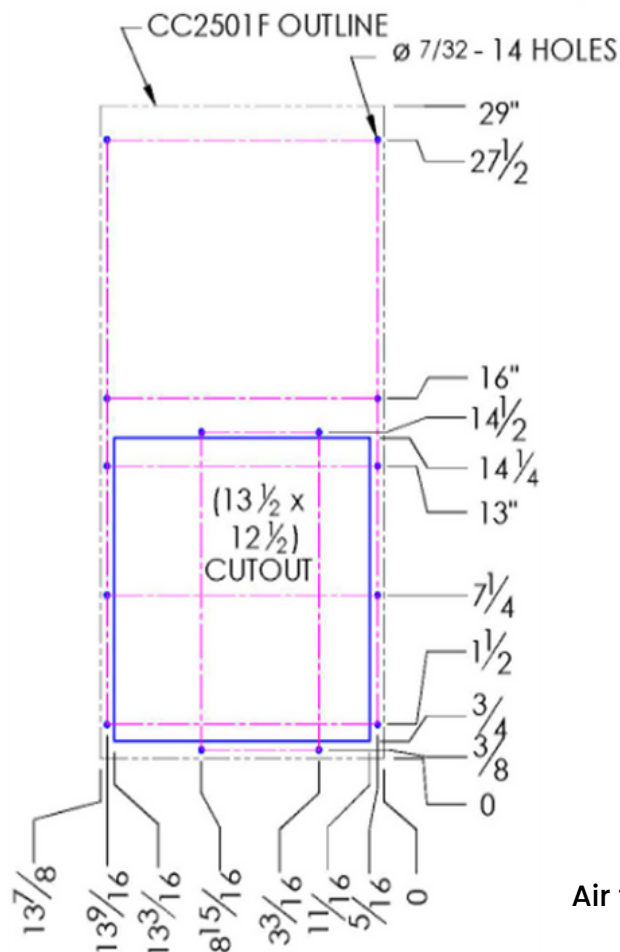
■ HEAT EXCHANGER AIR TO AIR CC2501F



Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC2501F-WL-TYPE 4X	48 lbs	7,100	1.2	4x6"	29x13.8x7.8
Efficiency: 104.0 Watts/°C ΔT based on average internal cabinet temperature					

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

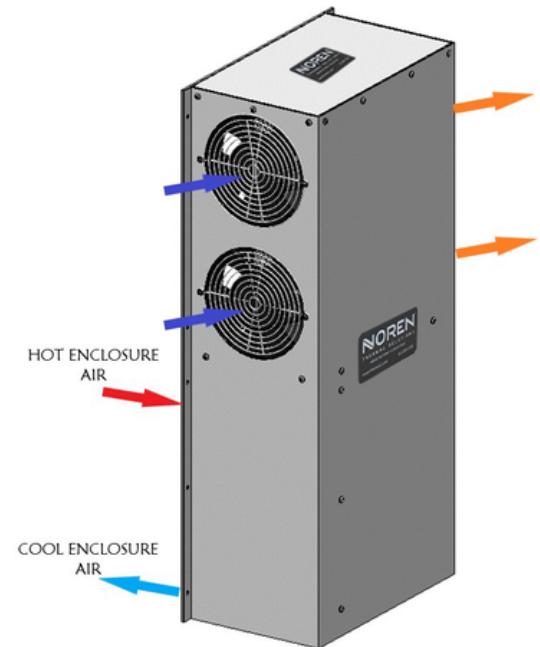


CC2501F WL TYPE 4X
Air to Air Flush-Mount Model

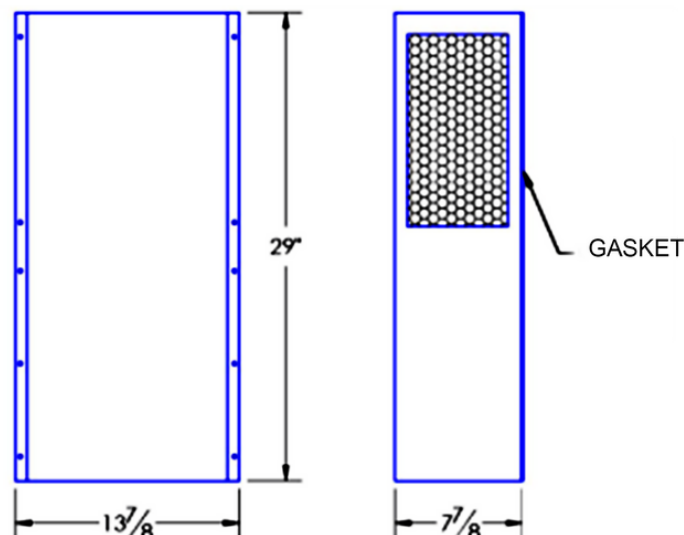


FLUSH-MOUNT - CC2501F WL TYPE 4X PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 or 4X environments
2. CC2501F Rated cooling: 2,080 Watts at 20°CΔT (104.0 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is Type 304 Stainless Steel. (316 SS or powder coated Aluminum optional)
5. Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet
6. Pressure tested to ensure liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL)
8. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: inlet air-filter kit available upon request
12. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC2501F

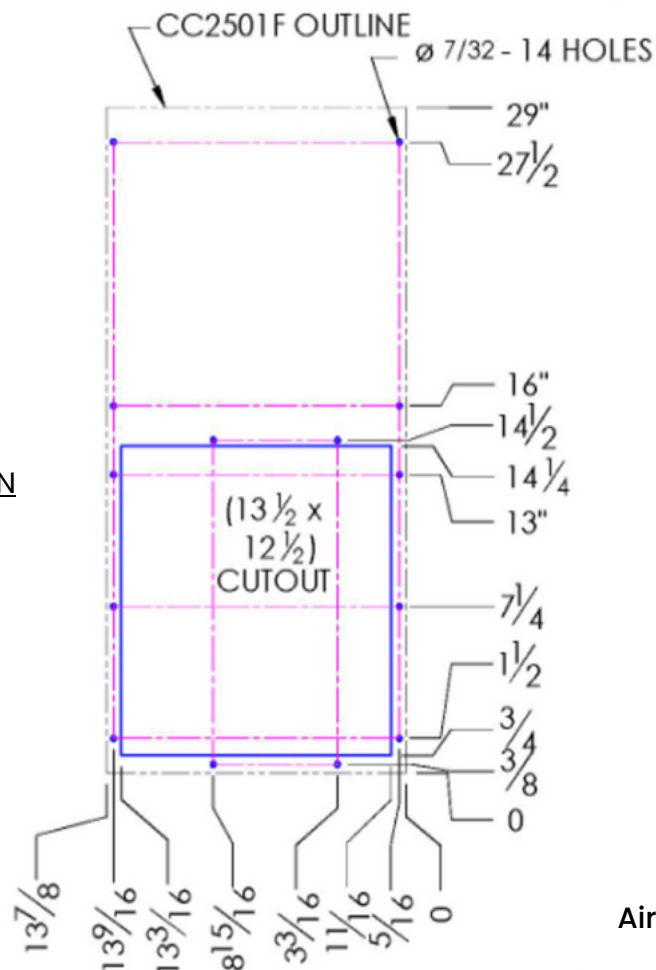


Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC2501-WL-TYPE 4	30 lbs	7,100	1.2	4x6"	29x13.8x7.8

Efficiency: 104.0 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

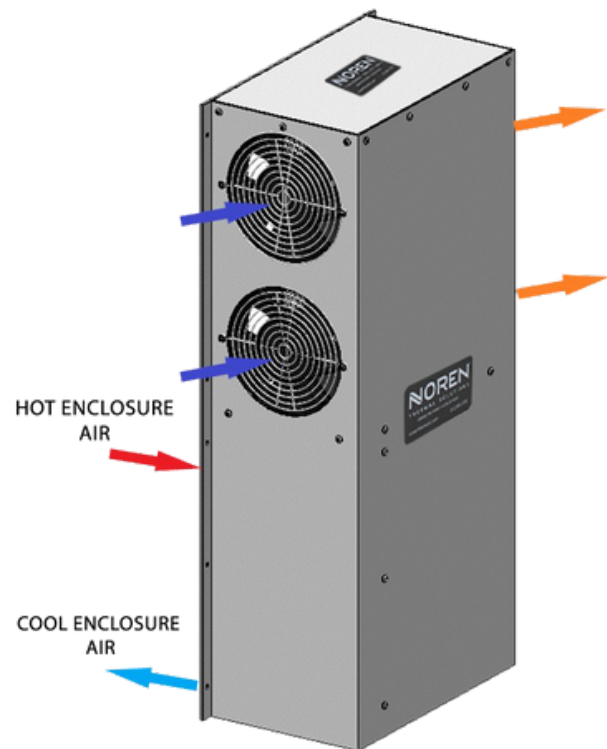


CC2501F WL TYPE 4
Air to Air Flush-Mount Model

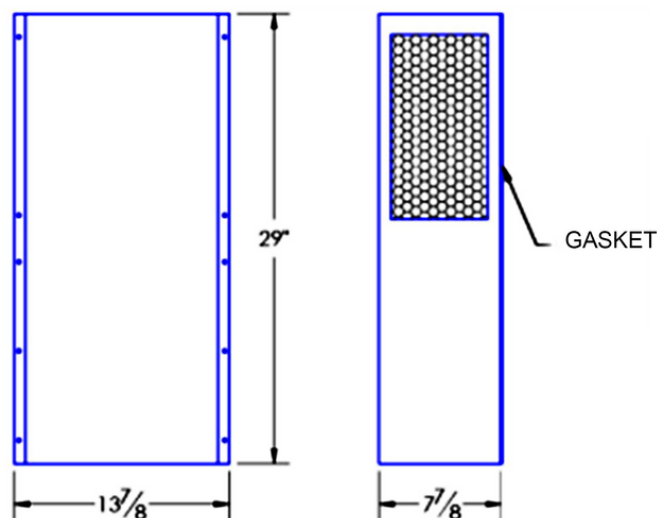


FLUSH-MOUNT - CC2501F WL TYPE 4 PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 4 environments
2. CC2501F Rated cooling: 2,080 Watts at 20°C ΔT (104.0 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel available (TYPE 4X)
5. Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet
6. Pressure tested to ensure a liquid-tight seal
7. External fan is UL rated for Wet Locations / Outdoor use (WL) This new fan is the Noren Universal Fan (UF)
8. Internal 6-ft. power cord with 3-prong plug is standard for AC-powered units
9. Available with VAC (115 & 230) and VDC (12, 24, & 48) fans. DC-powered units include a junction box; consult the website
10. Vertical mounting (as shown) is standard. Call for horizontal applications
11. Optional: inlet air-filter kit available upon request
12. For design, quote, and sizing assistance: call **(512) 595-5700**



DIMENSIONS AND MOUNTING (INCHES)



■ HEAT EXCHANGER AIR TO AIR CC4000F

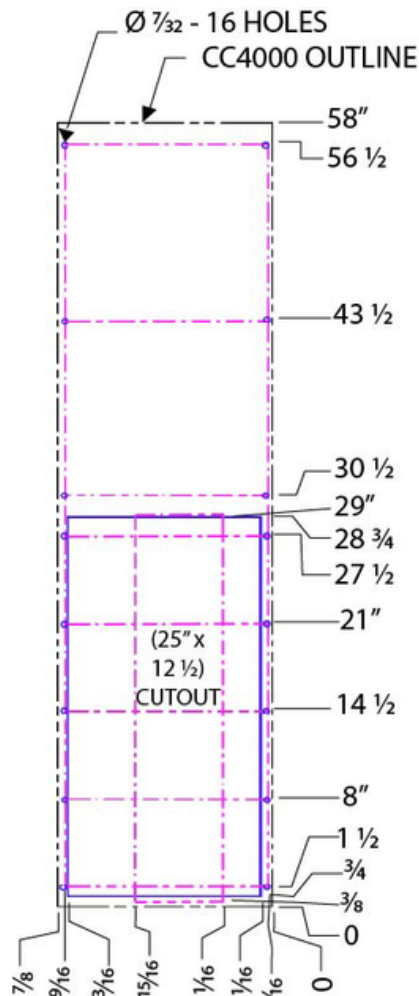


Model	Weight (lbs)	Rating @ 20°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC4000F	60 lbs	13,700	2.4	8x6"	58x13.88x7.88

Efficiency: 62.7 Watts/°C ΔT based on average internal cabinet temperature

CUT OUT AND HOLE PATTERN (INCHES)

CABINET HOLE PATTERN
(EXTERNAL VIEW)

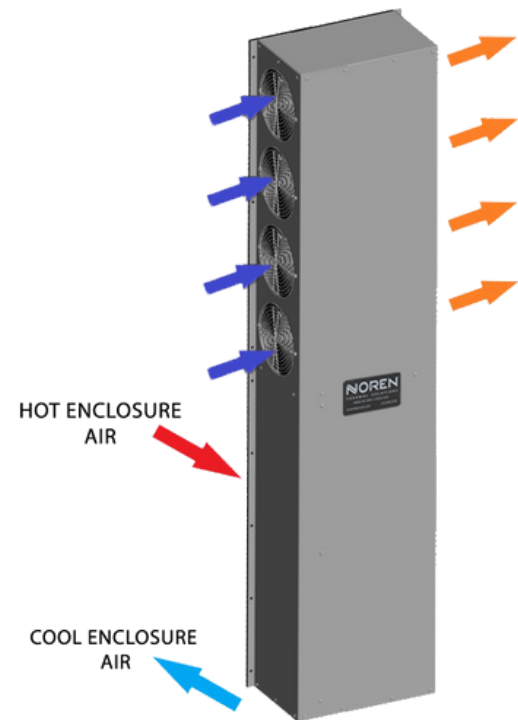


CC4000F TYPE 12
Air to Air Flush-Mount Model

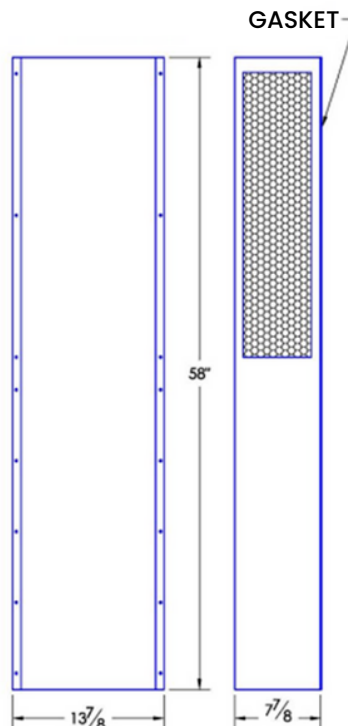


FLUSH-MOUNT - CC4000F PRODUCT SPECIFICATIONS

1. UL Listed for TYPE 12 environments
2. CC4000 Rated cooling: 4,000 Watts at 20°C ΔT (200.0 W/°C, mounted to an uninsulated 72" x 36" x 24" cabinet)
3. Designed for surface mounting on the outside of the cabinet
4. Housing is aluminum (Standard color). Stainless steel is available
5. Equipped with a mounting gasket to maintain an airtight seal
6. Available with VAC (115 & 230) and VDC (12, 24, & 48V) fans
7. Unit may be mounted vertically (as shown)
8. Optional: Inlet air-filter kit available upon request
9. For design, quote, and sizing assistance: call **(512)595-5700**



DIMENSIONS AND MOUNTING (INCHES)



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