

# PRODUCT CATALOG

AIR TO WATER HAZARDOUS LOCATION

MAKING THE WORLD A COOLER PLACE

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### **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 a green business. We pride ourselves on delivering exceptional customer service with each thermal solution.

**Mission Statement:** Noren Products 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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exchangers designed for hazardous Noren heat locations are available with the ATEX/IECEx certification. They can be operated in industries such as oil and gas, generation, wastewater treatment, food power processing, and more. Below-ambient cooling units offer a superior cooling output for environments where temperatures must be kept under a particular value compared to the ambient. This unit complies with NSF 61 & 372 requirements ensuring the water used does not pose any consumption risk and can be distributed.



# AIR-TO-WATER HAZARDOUS LOCATION

Noren Flush-Mount heat exchangers are designed to attach to the side or door of electrical enclosures. It requires 1 gallon per minute water source to properly cool the enclosure.



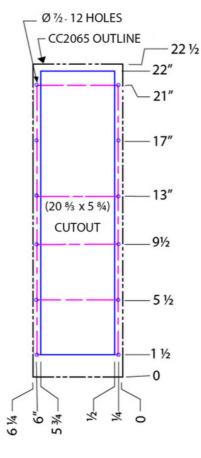
# ■ HEAT EXCHANGER AIR TO WATER CC2065PHL HAZARDOUS LOCATION



Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC2065 PHL	9 lbs	3,350	0.25	2x4"	22.5x6.25x4.06
Efficiency: 24.5 Watts/°C ΔT based on average internal cabinet temperature					

### **CUT OUT AND HOLE PATTERN (INCHES)**

CABINET HOLE PATTERN (EXTERNAL VIEW)



Hazardous Location, Class 1,
Division 2,
Group A, B, C and D
Air to Water Flush-Mount Model



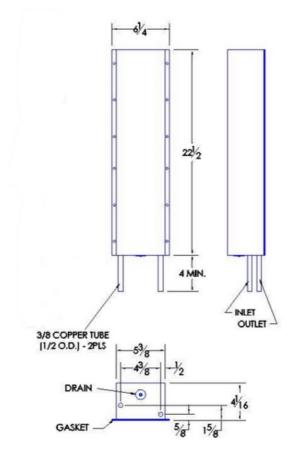




# FLUSH-MOUNT - CC2065PHL TYPE 4X, XXX, CLASS 1/DIV 2 PRODUCT SPECIFICATIONS:

- 1. UL Listed for TYPE 4X environments, Hazard Location Class 1 / Div 2
- **2.** CC2065PHL Rated cooling: 982 Watts mounted to an uninsulated 24" x 24" x 16" Cabinet with 1GPM of water at 20°C, 40°C ambient air and 60°C cabinet air temperature (Temp Code T4)
- 3. Designed for surface mounting on the outside of the cabinet
- 4. Housing is Stainless Steel (TYPE 316)
- **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. Internal 6-ft power cord
- **8.** Available with DC and AC (12VDC, 24VDC, 48VDC, 115VAC & 230VAC).
- 9. Designation xxx indicates voltage
- 10. Vertical mounting (as shown) only
- 11. Coolant water pressure: Pressure tested to 100 psi. Safe working pressure is 60 psi
- 12. Recommended water flow rate (gallons per minute): IGPM
- 13. For design, quote, and sizing assistance: call (512) 595-5700



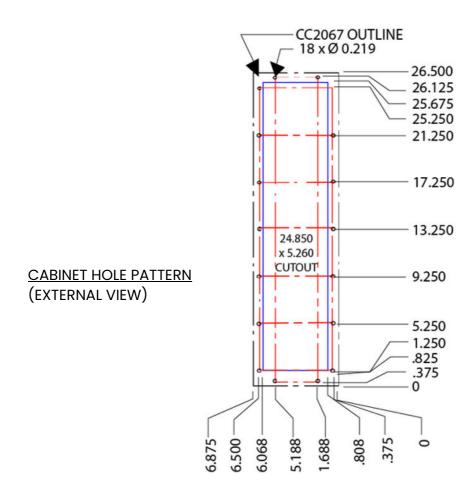


# ■ HEAT EXCHANGER AIR TO WATER CC2067 HAZARDOUS LOCATION

Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)	
CC2065 PHL	12 lbs	3,350	0.2	2x4"	26.5×6.8×4	
Efficiency: 24.5 Watts/°C ΔT based on average internal cabinet temperature						
ATEX/IECEx Certificate reference: <b>DEMKO 15 ATEX 1403. IECEx UL 15.0081 x</b>						



### **CUT OUT AND HOLE PATTERN (INCHES)**



Hazardous Location, Class 1,
Zone 2 (ATEX/IECEx)
Air to Water Flush-Mount Model



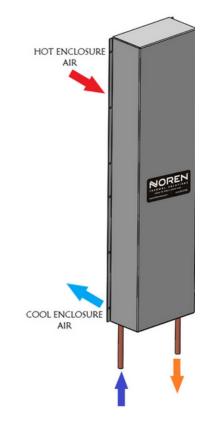


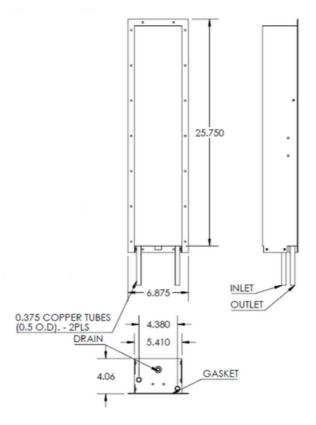




### FLUSH-MOUNT - CC2067FHL WL IP66, XXX PRODUCT SPECIFICATIONS

- 1. ATEX/IECEx certified for hazardous locations Class I, Zone 2 environments
- **2.** CC2067PHL Rated cooling: 982 Watts mounted to an uninsulated 72" x 36" x 24" Cabinet with 1 GMP of water at 20°C, 40°C ambient air and 60°C cabinet air temperature
- 3. Designed for surface mounting on the outside of the cabinet.
- 4. Housing is Stainless Steel (TYPE 316 14 GAUGE)
- 5. External water inlet and outlet connections
- 6. Equipped with a mounting gasket to maintain an airtight seal
- 7. Pressure tested to ensure a watertight seal
- 8. Available with AC (115 & 230V) and DC (12, 24 & 48V)
- 9. Vertical mounting only
- **10.** Coolant water pressure: Pressure tested to 100psi. The safe working pressure is 60 psi
- 11. Recommended coolant flow rate (gallons per minute): 1GPM
- 12. Optional: inlet air-filter kit available upon request
- **13.** ATEX/IECEX Standards: 60079-0, 6th Ed. + Corr. 1:2012 + Corr. 2:2013, IEC 60079-15, 4th Ed., CENELEC EN 60079-0:2012 + A11:2013 and CENELEC EN 60079-15:2010
- 14. For design, quote, and sizing assistance: call (512) 595-5700





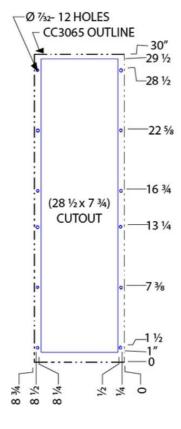
# ■ HEAT EXCHANGER AIR TO WATER CC3065PHL HAZARDOUS LOCATION



Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC3065 PHL	13 lbs	9,300	0.36	1×6"	30x8.75x4.06
Efficiency: 68.8 Watts/°C ΔT based on average internal cabinet temperature					

### **CUT OUT AND HOLE PATTERN (INCHES)**

CABINET HOLE PATTERN
(EXTERNAL VIEW)



Hazardous Location, Class 1,
Division 2,
Group A, B, C and D
Air to Water Flush-Mount Model



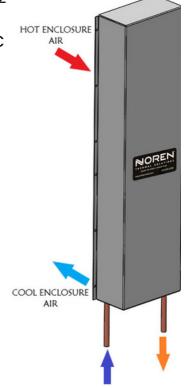


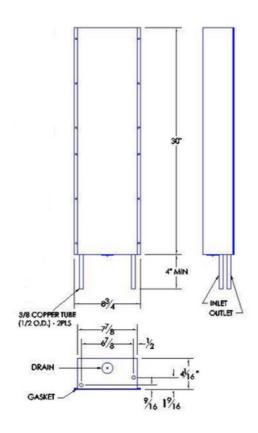




# FLUSH-MOUNT - CC3065PHL TYPE 4X, XXX, CLASS 1/DIV 2 PRODUCT SPECIFICATIONS:

- 1. UL Listed for TYPE 4X environments, Hazard Location Class 1 / Div 2
- **2.** CC3065PHL Rated cooling: 2,725 Watts mounted to an uninsulated 72" x 36" x 24" Cabinet with IGPM of water at 20°C, 40°C ambient air and 60°C cabinet air temperature (Temp Code T4)
- 3. Designed for surface mounting on the outside of the cabinet
- 4. Housing is Stainless Steel (TYPE 316)
- 5. External water inlet and outlet connections
- **6.** Equipped with a mounting gasket to maintain the TYPE 4X integrity of your cabinet.
- 7. Pressure tested to ensure a liquid-tight seal.
- 8. Internal 6-ft power cord.
- **9.** Available with DC and AC (12VDC, 24VDC, 48VDC, 115VAC & 230VAC) Designation xxx indicates voltage
- 10. Vertical mounting (as shown) only
- 11. Coolant water pressure: Pressure tested to 100 psi. The safe working pressure is 60 psi
- 12. Recommended water flow rate (gallons per minute): IGPM
- 13. For design, quote, and sizing assistance: call (512) 595-5700





### ■ HEAT EXCHANGER AIR TO WATER CC3067 HAZARDOUS LOCATION

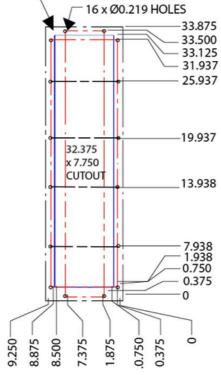
Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)	
CC3067 PHL	25 lbs	9,300	0.3	1x6"	33.8x9.25x4	
Efficiency: 68.8 Watts/°C ΔT based on average internal cabinet temperature						
ATEX/IECEx Certificate reference: <b>DEMKO 15 ATEX 1403. IECEx UL 15.0081 x</b>						



### **CUT OUT AND HOLE PATTERN (INCHES)**

CC3067 OUTLINE

CABINET HOLE PATTERN (EXTERNAL VIEW)



Hazardous Location, Class 1,
Zone 2 (ATEX/IECEx)
Air to Water Flush-Mount Model



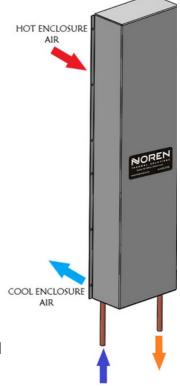


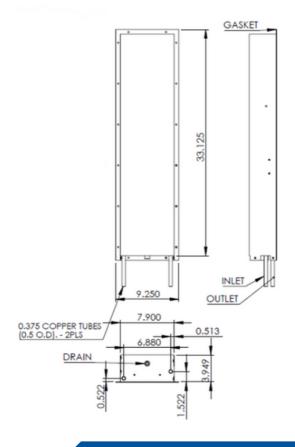




### FLUSH-MOUNT - CC3067FHL WL IP66, XXX PRODUCT SPECIFICATIONS:

- **1.** ATEX/IECEx certified for hazardous locations Class I, Zone 2 environments
- **2.** CC3067PHL Rated cooling: 2,725 Watts mounted to an uninsulated 72" x 36" x 24" Cabinet with 1 GPM of water at 20°C, 40°C ambient air and 60°C cabinet air temperature
- 3. Designed for surface mounting on the outside of the cabinet
- 4. Housing is Stainless Steel (TYPE 316 14 GAUGE)
- 5. External water inlet and outlet connections
- 6. Equipped with a mounting gasket to maintain an airtight seal
- 7. Pressure tested to ensure a watertight seal
- 8. Available with AC (115 & 230V) and DC (12, 24 & 48V)
- **9.** Vertical mounting only
- **10.** Coolant water pressure: Pressure tested to 100psi. Safe working pressure is 60 psi
- 11. Recommended water flow rate (gallons per minute): 1GPM
- **12.** ATEX/IECEX Standards: 60079-0, 6th Ed. + Corr. 1:2012 + Corr. 2:2013, IEC 60079-15, 4th Ed., CENELEC EN 60079-0:2012 + A11:2013 and CENELEC EN 60079-15:2010
- 13. For design, quote, and sizing assistance: call (512) 595-5700



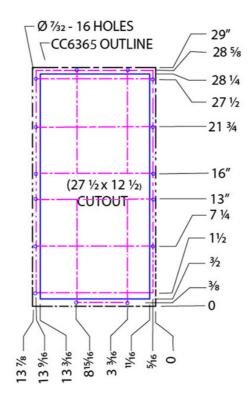


# ■ HEAT EXCHANGER AIR TO WATER CC6365 HAZARDOUS LOCATION



Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)
CC6365 PHL	32 lbs	21,800	0.9	3x6"	29x13.8x7.94
Efficiency: 159.7 Watts/°C ΔT based on average internal cabinet temperature					

### **CUT OUT AND HOLE PATTERN (INCHES)**



<u>CABINET HOLE PATTERN</u> (EXTERNAL VIEW)

Hazardous Location, Class 1,
Division 2,
Group A, B, C and D
Air to Water Flush-Mount Model

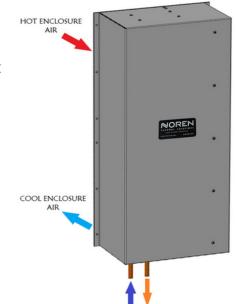


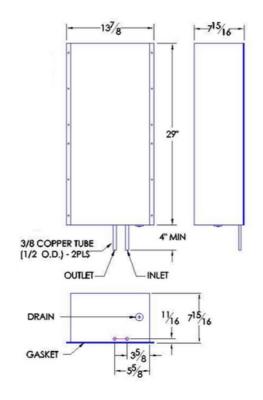




# FLUSH-MOUNT - CC6365PHL TYPE 4X, XXX, CLASS 1/DIV 2 PRODUCT SPECIFICATIONS:

- 1. UL Listed for TYPE 4X environments, Hazard Location Class 1 / Div 2
- **2.** CC6365PHL Rated cooling: 6,389 Watts mounted to an uninsulated 72" x 36" x 24" Cabinet with IGPM of water at 20°C, 40°C ambient air and 60°C cabinet air temperature (Temp Code T4)
- 3. Designed for surface mounting on the outside of the cabinet
- 4. Housing is Stainless Steel (TYPE 316)
- 5. External water inlet and outlet connections
- **6.** Equipped with a mounting gasket to maintain the TYPE 4X the integrity of your cabinet.
- 7. Pressure tested to insure a liquid-tight seal
- 8. Internal 6-ft power cord
- 9. Available with DC and AC (12VDC, 24VDC, 48VDC, 115VAC & 230VAC). Designation xxx indicates the voltage
- 10. Vertical mounting (as shown) only
- 11. Coolant water pressure: Pressure tested to 100 psi. The safe working pressure is 60 psi
- **12.** Recommended coolant water flow rate (gallons per minute): IGPM
- 13. For design, quote, and sizing assistance: call (512) 595-5700



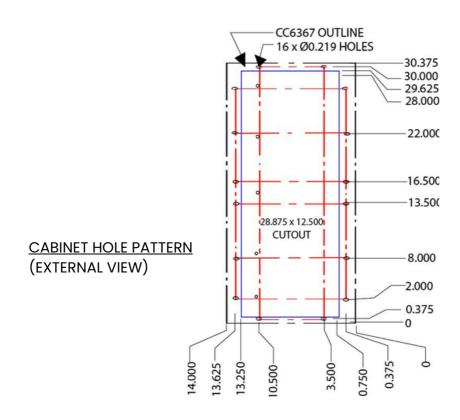


### ■ HEAT EXCHANGER AIR TO WATER CC6367 HAZARDOUS LOCATION

Model	Weight (lbs)	Rating @ 40°C ΔT (BTU/hr)	Amps current Draw at 115 volts AC	Fan size	Dimensions-Inches (HxWxD)	
CC6367 PHL	52 lbs	21,800	0.9	3x6"	30.3x14x8	
Efficiency: 159.7 Watts/°C ΔT based on average internal cabinet temperature						
ATEX/IECEx Certificate reference: <b>DEMKO 15 ATEX 1403. IECEx UL 15.0081 x</b>						



### **CUT OUT AND HOLE PATTERN (INCHES)**



Hazardous Location, Class 1,
Zone 2 (ATEX/IECEx)
Air to Water Flush-Mount Model



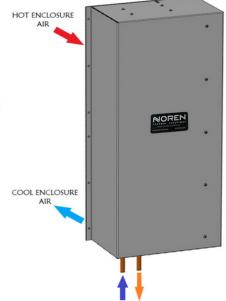


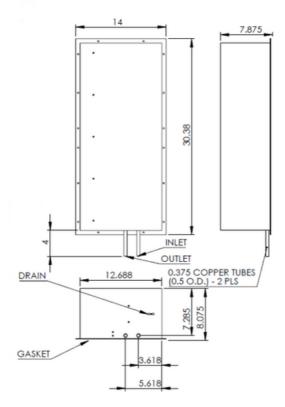




# FLUSH-MOUNT - CC6367FHL WL IP66, XXX PRODUCT SPECIFICATIONS:

- **1.** ATEX/IECEx certified for hazardous locations Class I, Zone 2 environments
- **2.** CC6367PHL Rated cooling: 6.389 Watts mounted to an uninsulated 72" x 36" x 24" Cabinet with 1 GMP of water at 20°C, 40°C ambient air and 60°C cabinet air temperature
- 3. Designed for surface mounting on the outside of the cabinet.
- 4. Housing is Stainless Steel (TYPE 316 14 GAUGE)
- 5. External water inlet and outlet connections
- 6. Equipped with a mounting gasket to maintain an airtight seal
- 7. Pressure tested to ensure a watertight seal
- 8. Available with AC (115 & 230V) and DC (12, 24 & 48V)
- 9. Vertical mounting only
- **10.** Coolant water pressure: Pressure tested to 100psi. The safe working pressure is 60 psi
- **11.** Recommended coolant water flow rate (gallons per minute): IGPM
- **12.** ATEX/IECEX Standards: 60079-0, 6th Ed. + Corr. 1:2012 + Corr. 2:2013, IEC 60079-15, 4th Ed., CENELEC EN 60079-0:2012 + A11:2013 and CENELEC EN 60079-15:2010
- 13. For design, quote, and sizing assistance: call (512) 595-5700





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Thermal Heat Exchange Solutions

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Thermal Heat Exchange Solutions

INTERNATIONAL



### **GET IN TOUCH**

#### WE ARE LOOKING FORWARD TO STARTING A PROJECT WITH YOU!

#### HAVE A LOOK AT THE SECTIONS BELOW.



Contact Noren
directly, fill out a form
and we will get back
to you as soon as
possible.



Need some answers?
Check out our page
for Frequently Asked
Questions about
Noren.



Find your solution, use our quick calculator to find out which Noren heat exchanger best meets your needs.

#### NOREN THERMAL SOLUTIONS PROFILE



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