

## Application:

- ECD drains and breathers are installed in enclosures or conduit systems to:
  - provide ventilation to minimize condensation
  - drain accumulated condensate
- At least one breather should be used with each drain
- A breather is installed in top of enclosure or upper section of conduit system
- A “standard” drain is installed in bottom of enclosure or in lower section of conduit system
- “Universal” breather or drain functions as a breather when mounted at the top of an enclosure, or as a drain when mounted in the bottom of an enclosure
- “Combination” breather and drain is used in those applications where the use of a top mounted breather is not practical due to limited space; or in offshore and marine installations where moisture may enter the enclosure through the breather located on top of enclosure
- Drains and breathers are installed in hubs or drilled and tapped openings

## Features:

- ECD284, ECD384, ECD385 and ECD15 “Universal” drains and breathers have:
- patented labyrinth design, suitable for use in Class I, Division 1 & 2, Groups C,D and Class II, Division 1 & 2, Groups F,G areas
  - capability to pass 50 cc of water per minute and 0.2 cubic feet of air per minute at atmospheric pressure
  - ECD15 and ECD385 each have a well inside the inner, threaded end to provide for accumulation of sediment without clogging when used as a drain.
- “Standard” ECD drains and breathers have:
- thread-in-thread design, suitable for use in Class I, Division 1 & 2, Groups C,D; Class II, Division 1, Groups E,F,G; Class II, Division 2, Groups F,G and Class III areas
  - ECD 11, 13 have capability to pass 25 cc of water per minute and .05 cubic feet of air per minute at atmospheric pressure
  - ECD387 and ECD16 are a unique thread-in-shaft design for use in Class I, Division 1 & 2, Groups B,C,D; Class II, Division 1, Groups E,F,G; Class II, Division 2, Groups F,G; Class III areas. The ECD387 and ECD16 can pass 15cc of water per minute. The ECD16 can pass .01 cubic feet of air per minute.
- “Combination” ECD breather and drain:
- provides ventilation to minimize condensation and drains accumulated condensate – two functions performed by a single device installed in the bottom of an enclosure or conduit system
  - Have the capability to pass 25 cc of water per minute and .10 cubic feet of air per minute at atmospheric pressure
  - Thread-in-thread and labyrinth design, suitable for use in Class I, Division 1 & 2, Groups C and D; Class II, Division 1 & 2, Groups F and G; and Class III areas

## Size Ranges

- ¼” to ½”

## ECD “Type 4X” Drain and Breather

Size	Drain Cat. #	Breather Cat. #
¾	ECD38-N4D	ECD38-N4B
½	ECD1-N4D	ECD1-N4B

## ECD “Standard” Drain and Breather

Size	Drain Cat. #	Breather Cat. #
¼	ECD281	
¾	ECD387	
½	ECD11	ECD13

## ECD “Universal” Drain or Breather

Size	Cat. #
¼	ECD284†
¾	ECD384†
¾	ECD385
½	ECD15
½	ECD16

## ECD “Combination” Drain and Breather

Size	Cat. #
½	ECD18

## Standard Materials:

- ECD11, ECD15, ECD281, ECD284, ECD384, ECD385 – stainless steel
- ECD13 – stainless steel with aluminum cap
- ECD16, ECD-N4D, ECD-N4B – stainless steel
- ECD387 – stainless steel
- ECD18 – Stainless steel with neoprene tube

## Certifications and Compliances:

- NEC/CEC:
  - ECD 16, ECD387, ECD-N4D, ECD-N4B** – Class I, Division 1 & 2, Groups B,C,D  
Class II, Division 1, Groups E,F,G  
Class II, Division 2, Groups F,G  
Class III
  - ECD11, ECD13, ECD281** – Class I, Division 1 & 2, Groups C,D  
Class II, Division 1, Groups E,F,G  
Class II, Division 2, Groups F,G  
Class III
  - ECD18, ECD384, ECD15, ECD385** – Class I, Division 1 & 2, Groups C,D  
Class II, Division 1, Groups F,G  
Class II, Division 2, Groups F,G  
Class III
  - ECD284** – Class I, Division 1 & 2, Group C,D  
Class II, Division 1, Groups F,G  
Class II, Division 2, Groups F,G
- UL: Standard 886
- CSA Standard: C22.2 No. 30
- Type 4X: ECD-N4D and ECD-N4B

† Shorter overall length than ECD15 and ECD385. For use in confined spaces such as panelboard assemblies.



ECD11



ECD13



ECD15



ECD16



ECD18



## Typical installation of drain and breather in a combination motor starter

- NOTES:**
1. At least 5 full threads of drain or breather must be engaged in matching female thread, taper-tapped in accordance with NEMA/EEMAC Standard FB-1, Type NTC or National Bureau of Standards Handbook H28, Part II, Table 7.6.
  2. These breathers and drains can be factory installed on various explosion-proof equipment. See options on applicable equipment pages for suffixes to be used.