Drains and Breathers

Cl. I, Div. 1 & 2, Groups B,C,D Explosionproof
Cl. II, Div. 1, Groups E,F,G Dust-Ignitionproof
Cl. II, Div. 2, Groups F,G
Cl. III

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 or 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″

ECD11

ECD13

ECD16

ECD ''Standard''
Drain and Breather

Male Thread Size	Drain for Water Only Cat. #	Breather for Air Only Cat. #
¼	ECD281	
⅜	ECD387	
½	ECD11	ECD13

Standard Materials:

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

Certifications and Compliances:

- NEC/CEC:
  ECD 16, ECD387 –
  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

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

ECD ''Universal''
Drain or Breather

Male Thread Size	Cat. #
¼	ECD284†
⅜	ECD384†
⅜	ECD385
½	ECD15
½	ECD16

ECD ''Combination''
Drain and Breather

Male Thread Size	Cat. #
½	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.

CD Series Ordinary Location Drain

Straight Body ● Male Thread

Application:

CD Series drains are for use in conduit systems to:
- Drain accumulated condensate.
- Provide ventilation to minimize condensation.

Drains are installed in hubs or drilled and tapped openings.

Standard Materials:

- CD bodies and nuts – steel or aluminum
- CD screen – stainless steel

Standard Finishes:

- Steel – electrogalvanized with chromate treatment.

Certifications and Compliances:

- UL Standard 514B

Options:

- Copper-free aluminum construction – add suffix -SA

Ordering Information:

Size	Cat. #
½	CD1
¾	CD2