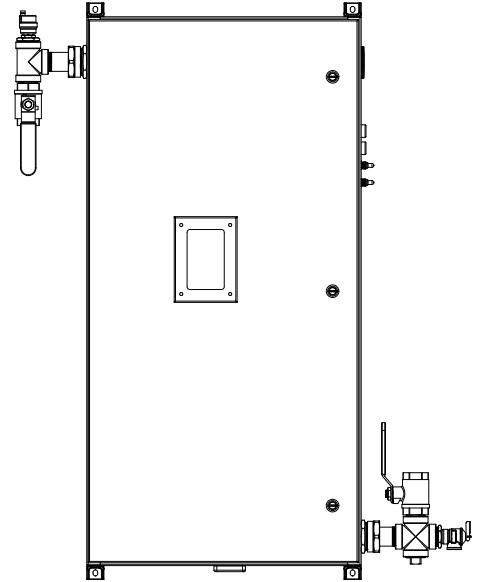


CES Series: CES 81, CES 90, CES 108 | NEMA 3, NEMA 4/4X

Specifications

|   |                                      |
|---|--------------------------------------|
| <b>Model</b>                            | CES 81, CES 90, CES 108              |
| <b>Phase</b>                            | 3-phase                              |
| <b>Inlet/outlet pipe connection</b>     | 1" female NPT                        |
| <b>Heat exchanger material</b>          | 316L stainless steel                 |
| <b>Enclosure rating</b>                 | NEMA 3 standard, NEMA 4/4X available |
| <b>Operating pressure range</b>         | 4 – 150 psi (0.27 – 10.3 bar)        |
| <b>Maximum temperature output</b>       | 90 °F (32 °C)                        |
| <b>Temperature adjustment range</b>     | 60 – 90 °F (16 – 32 °C)              |
| <b>Temperature adjustment increment</b> | 1 °F (1 °C)                          |
| <b>Number of heating elements</b>       | 18                                   |
| <b>Minimum activation flow</b>          | 2.0 gpm (7.6 l/m)                    |
| <b>Maximum flow at 60 psi</b>           | 40 gpm (151.4 l/m)                   |



| Model   | Part Number  | Voltage | Phase         | kW    | Amps   | 3P Breaker Size (A) | Temperature Rise °F (gpm = kW x 6.83 / Δt) |        |        |        |        |
|---------|--------------|---------|---------------|-------|--------|---------------------|--|--------|--------|--------|--------|
|         |              |         |               |       |        |                     | 5 gpm                                      | 10 gpm | 15 gpm | 20 gpm | 40 gpm |
| CES 81  | CES-81-400D  | 400     | 3-phase delta | 83.5  | 120.5  | 125                 | >100                                       | 57     | 38     | 29     | 14     |
|         | CES-81-480D  | 480     | 3-phase delta | 81.07 | 97.52  | 110                 | >100                                       | 55     | 28     | 18     | 14     |
| CES 90  | CES-090-400D | 400     | 3-phase delta | 87.50 | 126.30 | 150                 | >100                                       | 60     | 30     | 20     | 15     |
| CES 90  | CES-090-480D | 480     | 3-phase delta | 90.00 | 108.25 | 125                 | >100                                       | 62     | 31     | 21     | 15     |
| CES 108 | CES-108-400D | 400     | 3-phase delta | 100.0 | 144.3  | 175                 | >100                                       | 68     | 46     | 34     | 17     |
|         | CES-108-480D | 480     | 3-phase delta | 108.0 | 129.9  | 150                 | >100                                       | 74     | 49     | 37     | 18     |
|         | CES-108-575D | 575     | 3-phase delta | 108.2 | 108.6  | 125                 | >100                                       | 74     | 49     | 37     | 18.5   |



Intertek

Conforms to ANSI/UL Std. 499

Certified to CAN/CSA

Std. C22.2 No.88

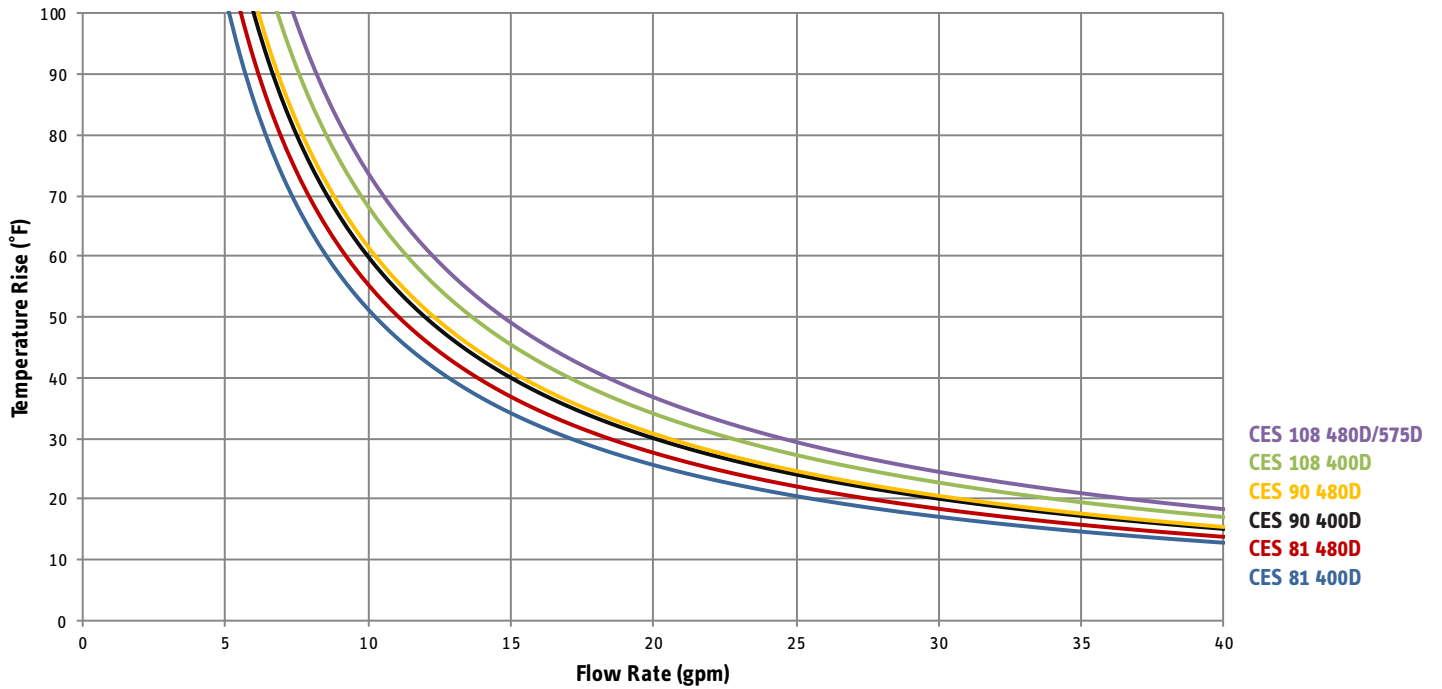


6 years against leakage /

2 years against defects in

workmanship & materials

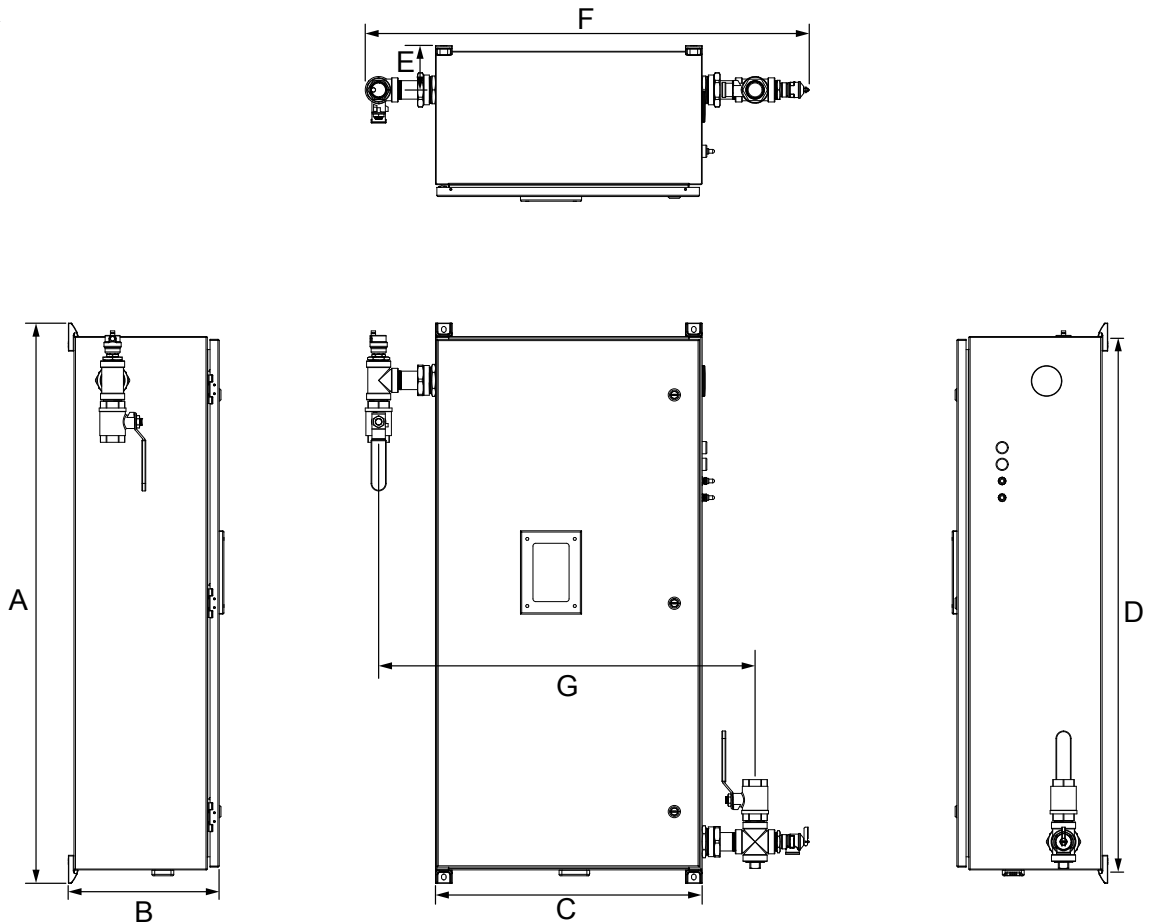
## Flow Rate



## Dimensions

### Dimensions

- A  $50 \frac{3}{8}$ " (1280 mm)
- B  $13 \frac{5}{8}$ " (346 mm)
- C  $24$ " (610 mm)
- D  $48$ " (1219 mm)
- E  $4$ " (102 mm)
- F  $37 \frac{3}{4}$ " (959 mm)
- G  $32 \frac{1}{4}$ " (819 mm)



rev. 12.2019 Due to our continuous process of engineering and technological advancement, specifications may change without notice.