

High Elevation – Air Cooled Oil Coolers

When sizing air cooled heat exchangers for high elevation applications, consideration should be given to the loss in performance because of the lower density of the cooling air. Use one of the following formulas that has an added factor CE1 or CE1 to offset this loss of performance. The net result of these calculations is a larger cooler.

C_{E1}

1. For AO, ACOC, AOVH, Air or Gas Aftercoolers (Air Cooled) coolers, AOC - Industrial and RM

$$\frac{\text{Horsepower to be removed} \times 2545 \times C_v \times C_{E1}}{\text{°F (Oil Leaving - Ambient Air Entering)}}$$

C_{E2}

2. For AOL, BOL, MA, OCA, ACOC(H), AOC - Mobile, MF, DF, DH, AOHM and AOVHM

Horsepower at Elevation = Horsepower Heat Load x C_{E2}

Elevation	C _{E1}	C _{E2}
0	1.00	1.00
1000	1.03	1.02
2000	1.05	1.04
3000	1.08	1.07
4000	1.10	1.08
5000	1.12	1.10
6000	1.14	1.11
7000	1.16	1.12
8000	1.18	1.12
9000	1.20	1.13
10000	1.22	1.14
11000	1.24	1.14
12000	1.25	1.15
13000	1.27	1.15
14000	1.28	1.15
15000	1.30	1.16