

EVAPORATOR REFRIGERANT RELIEF VALVE CALCULATIONS

F/O No.: 19173
Job Name: UNITED RENTALS
Unit Model: SCOD100AR4

E-HEX27100

TUBE SIDE PRODUCT R410A
TUBE SIDE PRESSURE 450 PSIG

SHELL SIDE PRODUCT 100% WATER
SHELL SIDE PRESSURE 150 PSIG

XP AREA UNCLASSIFIED
MULTIPLIER 1.0 **M **2.5 for XP, 1.0 for normal
REFRIGERANT FACTOR 2.5 **F **Refer Table
REFRIGERANT CIRCUITS 3

SHELL QTY 1
SHELL OD 10.74 IN
SHELL OD 0.90 FT D

OUTSIDE VESSEL & HEAD LENGTH 114.69 IN
TUBE LENGTH 9.56 FT L

MIN PRV C=MFDL
MIN PRV TOTAL VESSEL 21.38 LB-AIR /MIN **Result

QTY REFRIG CIRCUITS 3
MIN PRV PER CIRCUIT 7.13

SELECTED PRV SUPERIOR 3002-450-3/8"
SETTING 450 PSIG
RATING 15.1 LB-MIN

ACCEPTABLE

NOTE

PSV SIZED IN ACCORDANCE WITH ASHRAE/ANSI STANDARD 15

RELIEF VALVE IS LOCATED ON THE SUCTION OUTLET PIPE OF THE EVAPORATOR
MOUNTED IN A DOWNWARD POSITION

DESIGN CONDITIONS AT PSV 51 PSIG@40F

INLET PIPING NONE
OUTLET PIPING NONE