

CONDENSER
REFRIGERANT RELIEF VALVE CALCULATIONS

Job Name: Sunbelt Rentals

CRR Job No.: 19310

Unit Model: SACP 80A-HS

TUBE SIDE PRODUCT **R410A**
TUBE SIDE PRESSURE **650** PSIG

XP AREA **YES**
MULTIPLIER **1** **M **2.5 for XP, 1.0 for normal
REFRIGERANT FACTOR **2.5** **F **Refer Table

MUST RELIEVE HIGH SIDE ONLY - CALCULATE HIGH SIDE VOLUME ONLY

COND COIL
TUBES HIGH **36**
TUBES ROW **4**
COIL PER SYSTEM **2**
TUBE LENGTH **77** IN
TUBE DIA **0.375** IN
GROSS VOLUME 2448 CU-IN

DISCH PIPE
TUBES HIGH **1**
TUBES DEEP **1**
TUBE LENGTH **130** IN **Estmd
TUBE DIA **1.375** IN
GROSS VOLUME 193 CU-IN

LIQUID PIPE

TUBES	HIGH	1	
TUBES	DEEP	1	
TUBE LENGTH		140	IN **Estmd
TUBE	DIA	1.125	IN
GROSS VOLUME			139 CU-IN

TOTAL VOLUME 2780 CU-IN

REFORMAT TOTAL SYSTEM VOLUME INTO VESSEL

ASSUME I LENGTH	158	IN	**Estimate from condenser total FL / system, FL x no of coil per system
REQ AREA	18	IN	
DIAMETER	5		

SHELL	OD	4.73	IN
SHELL	THICKNESS	0.00	IN
SHELL	ID	4.73	IN
SHELL	GROSS ID AREA	17.60	SQIN

TUBE	QTY	0
TUBE	OD	0.75 IN
TUBE	AREA	0.44 IN
TUBE	TOTAL AREA	0.00 SQIN

SHELL	NET AREA	17.60
EQUIVALENT SHELL DIA		4.73 IN
EQUIVALENT SHELL DIA	0.39	FT D

SHELL LENGTH	158	IN
SHELL LENGTH	13.17	FT L

MIN PRV
MIN PRV

C=MFDL
12.99 LB-AIR /MIN

**Result

SELECTED PRV

SUPERIOR	3002C	
SETTING	650	PSIG
RATING	21.6	LB-MIN

ACCEPTABLE