

Air Conditioning Contractors of America • Manual S 2nd Edition (2014) Residential Equipment Selection

Project Information			
Name			
Address			
City	Lincoln		
State	NE	Zip Code	68512
System ID			

Design Information	
Outdoor Design Temperature - Summer	94
Indoor Design Temperature - Summer	75
Indoor Design %RH - Summer	50
Outdoor Design Temperature - Winter	
Project Location Elevation	1188

Proposed Equipment	System Type	Air-Air, Cooling Only, Variable Speed Compressor, Cold Winter or No Latent Load					
	Manufacturer		Furnace #		AFUE		
	Manufacturer	Mitsubishi	AHU/Coil #	SVZ-KP30NA		SEER	15.0
	Manufacturer	Mitsubishi	Condenser #	SUZ-KA30NAHZ		HSPF	9.00
	Manufacturer		Package #		Fan Speed	High	

Manual J Load Calculations	Heat	Total	Sensible	Latent	SHR
		Loss	BTUH	BTUH	BTUH
	34331	17340	13633	3707	0.786

To interpolate capacities, enter the listed capacities from the manufacturers cooling performance charts that are less than the design temperatures here								
Out DB per OEM Chart	86		Design CFM	Return Air (F wb)	Total BTUH	Sensible BTUH	Latent BTUH	SHR
In DB per OEM Chart	75							
Capacity from MFG table			875	64	26,811	21,610	5,201	0.81
Interpolated Capacity				63	26,262	22,174	4,088	0.84
Capacity from MFG table				61	25,164	23,302	1,862	0.93

To interpolate capacities, enter the listed capacities from the manufacturers cooling performance charts that are greater than the design temperatures here								
Out DB per OEM Chart	95		Design CFM	Return Air (F wb)	Total BTUH	Sensible BTUH	Latent BTUH	SHR
In DB per OEM Chart	75							
Capacity from MFG table			875	64	26,109	21,044	5,065	0.81
Interpolated Capacity				63	25,578	21,597	3,981	0.84
Capacity from MFG table				61	24,516	22,702	1,814	0.93

Out DB per OEM Chart	94		Design CFM	Return Air (F wb)	Total BTUH	Sensible BTUH	Latent BTUH	SHR	
In DB per OEM Chart	75								
Interpolated Equipment Capacity			875	63	25,654	21,661	3,993	0.84	
Excess Latent Capacity Calculation					143	143			
Mfg. Equipment Match-Up Adjustment Factor					1.00	1.00			
Altitude Adjustments					0.99	0.97			
Capacity @ Design Conditions					25,397	21,150	4,248	0.83	
Equipment Capacity as a % of Design					146.5%	155.1%	103.9%		

Oversizing Limits	187%	150%
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Heat Pump Data (if applicable)	Capacity @ 47 °F db	Capacity @ 17 °F db	Balance Point	Supplimental Heat Required	Altitude Adjustments	
	0.98				Cap. @ 47 °F db	Cap. @ 17 °F db
	34,000	32,000			5.8	1.20

Select Furnace or Boiler Option	Input Capacity	Output Capacity	Altitude Adjustment	Furnace Capacity	% of Load	Oversizing Limits
Furnace Data (if applicable)			0.96			200%

Electric Furnace	KW Proposed	KW Required	% of Load	Oversizing Limits
	8.00	10.06	80%	175%