Technical Manual

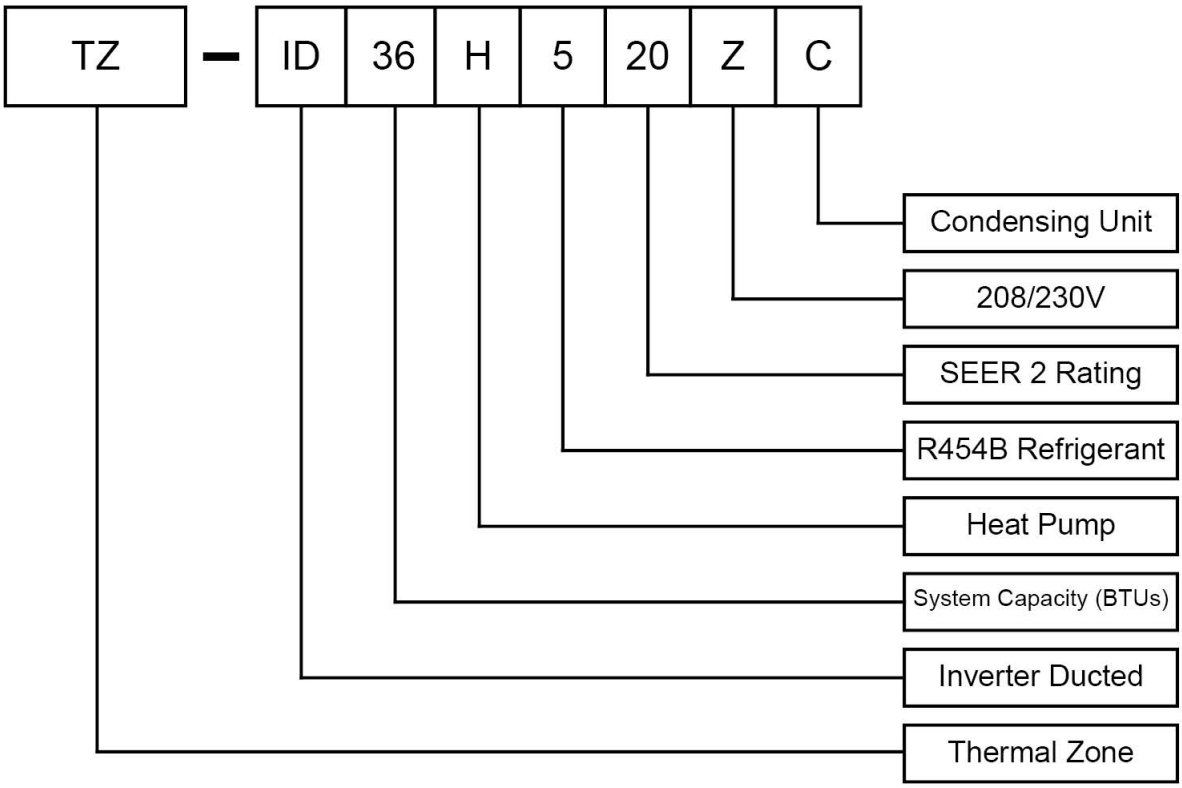
Thermal Zone Inverter Ducted 20 SEER2 Condensing Unit

For Models:
TZID36H520ZC
TZID60H520ZC

Features and Benefits:

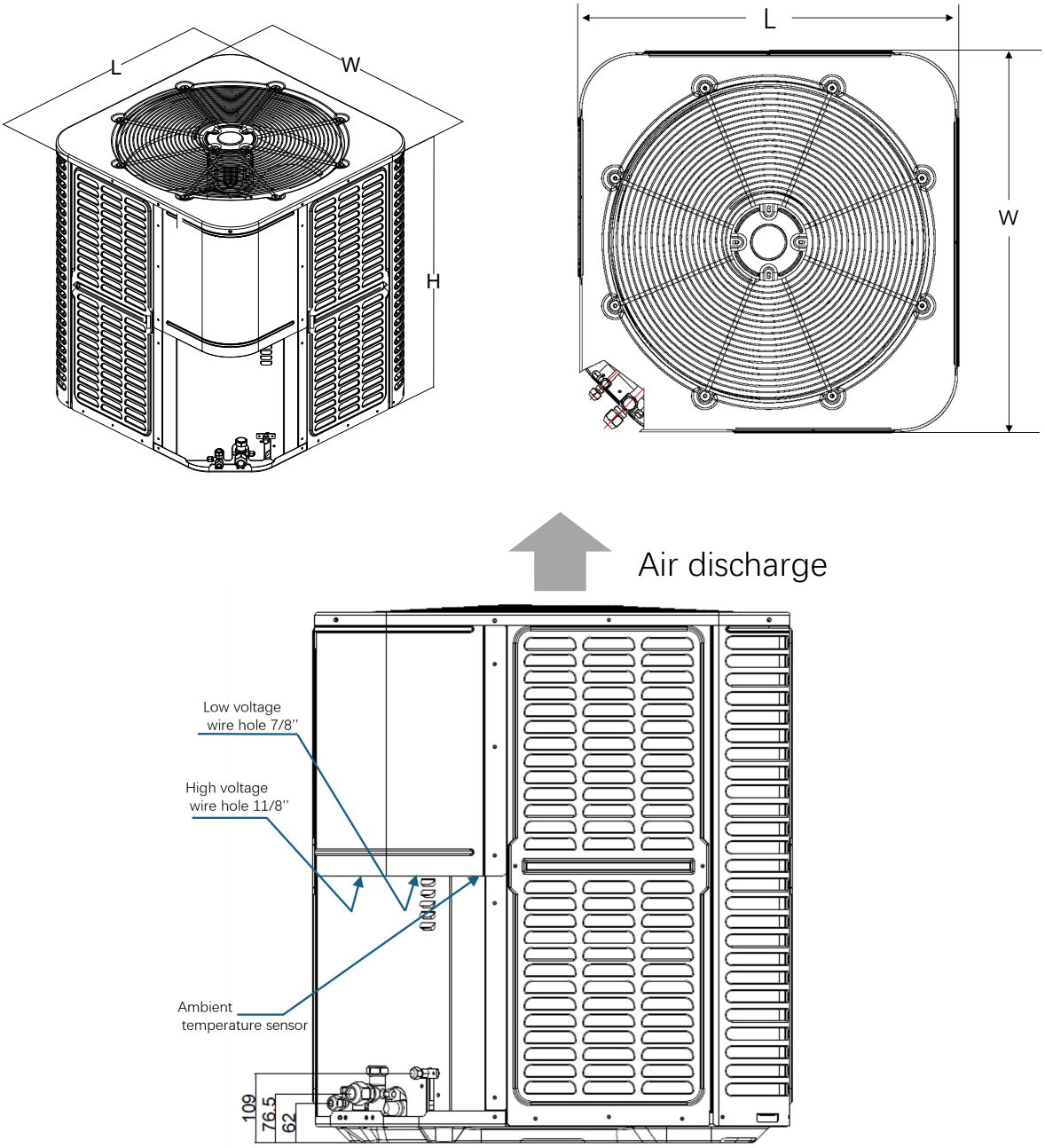
- Wide operation range.
- Well-known brand inverter compressor, reliable quality.
- Condenser coils constructed with copper tubing and enhanced golden fins.
- Use TXV (cooling) as expansion device, and heat pump type with EXV.
- DC fan motors, provide selections of air flow to meet desired applications.
- ECM fan motor for air handlers, higher efficiency, lower noise, constant speed.
- 24V control, time delay relay, fan relay and transformer included.
- R454b environment friendly refrigerant.
- The air handler unit has a refrigerant leakage sensor, providing safer protection.
- AHRI certification, ETL certification.
- Energy efficiency up to 20SEER2
- Multiple defrosting modes are available.
- RS485 communication mode can be selected, and the manufacturer's wired controller can be used to query the operating parameters of the indoor unit.
- The mainboard program can be upgraded via USB without a computer or special burning tool.
- Multiple operating modes are available, including Accelerated cooling/ heating, forced cooling, / heating.
- Refrigerant leakage sensor is configured to detect the refrigerant content in the air
- Intelligent oil return program to provide operating life
- To connect the copper pipe with flare connection, which is convenient and quick

MODEL NUMBER NOMENCLATURE



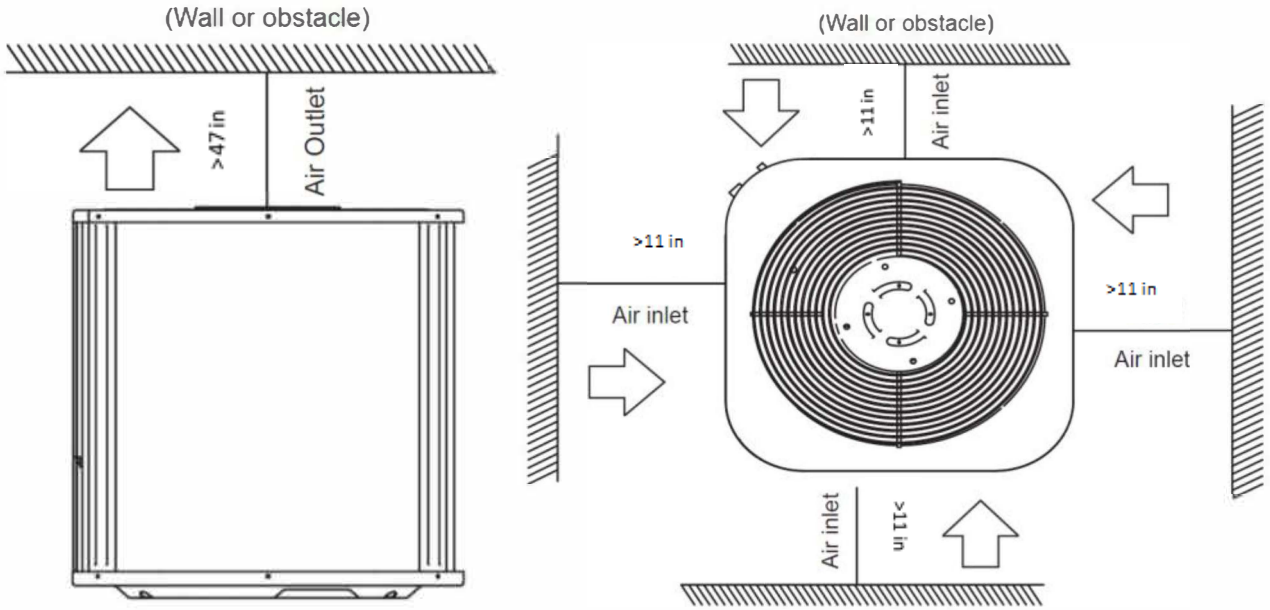
Model Number	Dimension(W×H×D) (inch)	Power supply
TZID36H520ZC	29-1/8×25×29-1/8	208/230V-1Ph-60Hz
TZID60H520ZC	29-1/8×32-7/8×29-1/8	208/230V-1Ph-60Hz

Dimensions

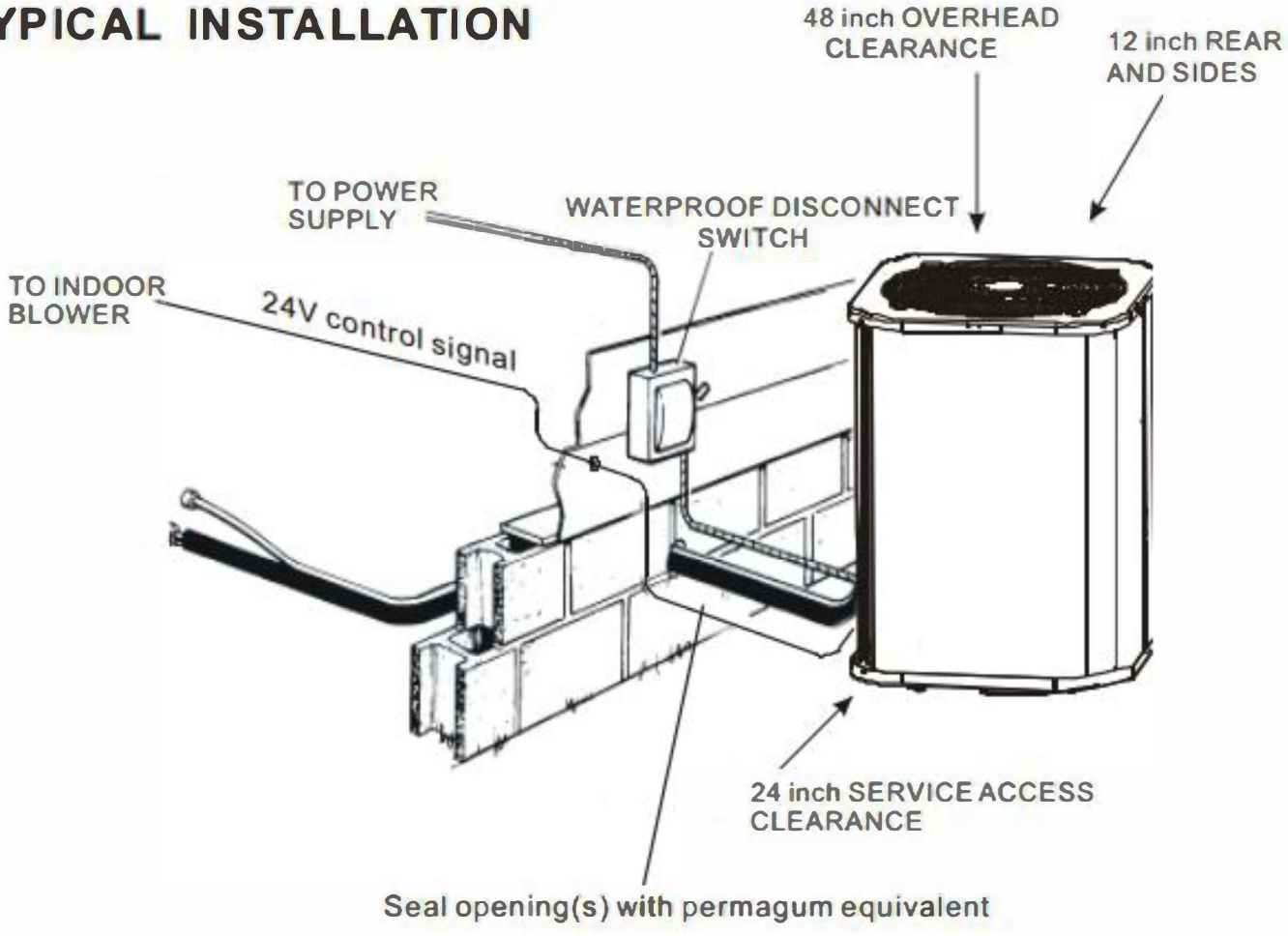


Model Number	H×W×L (inches)
TZID36H520ZC (2/3 Ton)	25 × 29-1/7 × 29-1/7
TZID60H520ZC (4/5 Ton)	32-7/8 × 29-1/7 × 29-1/7

Service Space



TYPICAL INSTALLATION



Electric Ratings

Model	Outdoor Unit					
	Hz	Voltage	Min.	Max.	MCA	MOP
TZID36H520ZC	60	208~230V	187V	253V	20.0	25.0
TZID60H520ZC	60	208~230V	187V	253V	30.0	40.0

Operating Temperatures

Operation mode	Outdoor temperature(℉)	Room temperature(℉)
Cooling operation	5—131	61—90
Heating operation	-4—86	61—90

Sound Levels

Sound Power Level without Sound Shield

MODEL	COOLING MODE		HEATING MODE	
	High frequency	Low frequency	High frequency	Low frequency
TZID36H520ZC	77.06dB	59.92dB	79.13dB	60.37dB
TZID60H520ZC	76.69dB	59.11dB	79.11dB	56.18dB

Vapor Line Sizing and Capacity Loss

Acceptable vapor line diameters provide adequate oil return to the compressor while avoiding excessive capacity loss. The suction line diameters shown in the chart below are acceptable for HP systems with R-454B refrigerant:

Vapor Line Sizing and Cooling Capacity Losses

Unit	Maximum Liquid Line Diameters (In. OD)	Acceptable Vapor Line Diameters (In. OD)	Cooling Capacity Loss (%) 1-Stage HP with R454B Refrigerant Total Equivalent Line Length ft.						
			25	45	50	65	75	85	100
24K	3/8	3/4	0.00%	0.59%	0.73%	1.16%	1.44%	1.71%	2.11%
36K	3/8	3/4	0.00%	0.79%	0.98%	1.55%	1.92%	2.29%	2.83%
48K	3/8	3/4	0.81%	2.03%	2.33%	3.20%	3.77%	4.32%	5.13%
60K	3/8	3/4	1.12%	2.74%	3.12%	4.23%	4.94%	5.63%	6.63%
1. The values in the table are based on actual test and simulation data under a fixed operation condition.									
2. Based on a certain refrigerant copper tube thickness, copper tube insulation cotton insulation effect, etc.									
3. The table is for reference only; the actual effect shall be based on the actual installation.									

Vapor Line Sizing and Heating Capacity Losses

Unit	Maximum Liquid Line Diameters (In. OD)	Acceptable Vapor Line Diameters (In. OD)	Heating Capacity Loss (%) 1-Stage HP with R454B Refrigerant Total Equivalent Line Length ft.						
			25	45	50	65	75	85	100
24K	3/8	3/4	0.00%	0.75%	0.94%	1.47%	1.82%	2.16%	2.66%
36K	3/8	3/4	0.00%	0.57%	0.71%	1.12%	1.39%	1.66%	2.05%
48K	3/8	3/4	-0.05%	0.33%	0.42%	0.70%	0.88%	1.06%	1.32%
60K	3/8	3/4	-0.05%	0.30%	0.39%	0.64%	0.81%	0.98%	1.22%
1. The values in the table are based on actual test and simulation data under a fixed operation condition.									
2. Based on a certain refrigerant copper tube thickness, copper tube insulation cotton insulation effect, etc.									
3. The table is for reference only; the actual effect shall be based on the actual installation.									
4. In heating mode, the heat loss of the refrigerant to the environment has a far greater impact on the unit's performance than the pipe size. Therefore, during installation, please strictly comply with local relevant regulations and properly insulate the copper pipes.									

DETAILED COOLING CAPACITIES

TZID24H520ZA+TZID36H520ZC for Cooling

CAH-D24HNR8-FMC(J0)+COT-D24HNR8-EA01(J0) for Cooling																			
Indoor Airflow(SCFM)	OD DB(℉)	ID WB(℉)	57				62				67				72				
		ID DB(℉)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85	
550	75	TC	4.7	5.0	5.8	6.6	6.7	6.7	6.7	6.8	7.6	7.6	7.6	7.6	/	8.3	8.3	8.3	
		S/T	0.88	1.00	1.00	1.00	0.61	0.73	0.85	0.96	0.44	0.55	0.65	0.76	/	0.40	0.50	0.59	
		INPUT	1.05	1.11	1.24	1.39	1.39	1.40	1.40	1.42	1.45	1.45	1.45	1.45	/	1.44	1.44	1.44	
	85	TC	4.7	5.0	5.8	6.6	6.6	6.6	6.6	6.6	7.3	7.3	7.3	7.3	/	8.0	8.0	8.0	
		S/T	0.88	1.00	1.00	1.00	0.61	0.73	0.85	0.97	0.44	0.55	0.66	0.77	/	0.40	0.50	0.60	
		INPUT	1.24	1.31	1.48	1.64	1.65	1.65	1.64	1.65	1.65	1.65	1.65	1.65	/	1.64	1.64	1.64	
	95	TC	4.7	5.0	5.8	6.4	6.3	6.3	6.3	6.4	6.9	6.9	6.9	6.9	/	7.6	7.6	7.6	
		S/T	0.88	1.00	1.00	1.00	0.61	0.74	0.87	0.99	0.44	0.56	0.67	0.79	/	0.40	0.51	0.61	
		INPUT	1.46	1.55	1.75	1.84	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.85	/	1.85	1.85	1.85	
	105	TC	4.6	5.0	5.4	5.7	5.4	5.5	5.5	5.7	6.0	6.0	6.0	6.0	/	6.6	6.6	6.6	
		S/T	0.88	1.00	1.00	1.00	0.64	0.78	0.93	1.00	0.44	0.58	0.71	0.85	/	0.40	0.52	0.65	
		INPUT	1.70	1.81	1.83	1.83	1.83	1.83	1.83	1.83	1.84	1.84	1.84	1.84	/	1.84	1.84	1.84	
	115	TC	4.0	4.2	4.5	4.8	4.4	4.4	4.5	4.8	4.9	4.9	4.9	4.9	/	5.4	5.4	5.4	
		S/T	0.95	1.00	1.00	1.00	0.68	0.86	1.00	1.00	0.45	0.62	0.78	0.94	/	0.41	0.56	0.71	
		INPUT	1.70	1.71	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	/	1.73	1.73	1.73	
	125	TC	3.7	4.0	4.3	4.6	4.1	4.1	4.3	4.6	4.5	4.5	4.5	4.6	/	5.0	5.0	5.0	
		S/T	0.98	1.00	1.00	1.00	0.70	0.89	1.00	1.00	0.46	0.63	0.81	0.98	/	0.41	0.57	0.73	
		INPUT	1.86	1.88	1.89	1.90	1.88	1.88	1.89	1.90	1.90	1.90	1.90	1.90	/	1.91	1.91	1.91	
600	75	TC	5.0	5.4	6.3	7.0	7.0	7.0	7.0	7.1	7.7	7.7	7.7	7.7	/	8.5	8.5	8.5	
		S/T	0.88	1.00	1.00	1.00	0.61	0.73	0.86	0.98	0.44	0.55	0.67	0.78	/	0.40	0.50	0.61	
		INPUT	1.11	1.18	1.34	1.47	1.47	1.47	1.47	1.47	1.46	1.46	1.46	1.46	/	1.45	1.45	1.45	
	85	TC	5.0	5.4	6.3	6.8	6.7	6.7	6.7	6.8	7.4	7.4	7.4	7.4	/	8.1	8.1	8.1	
		S/T	0.89	1.00	1.00	1.00	0.62	0.74	0.87	0.99	0.44	0.56	0.68	0.79	/	0.40	0.51	0.61	
		INPUT	1.32	1.41	1.59	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	/	1.65	1.65	1.65	
	95	TC	5.0	5.4	6.2	6.6	6.4	6.4	6.4	6.6	7.0	7.1	7.1	7.1	/	7.8	7.8	7.8	
		S/T	0.89	1.00	1.00	1.00	0.62	0.76	0.89	1.00	0.44	0.56	0.69	0.81	/	0.40	0.51	0.63	
		INPUT	1.55	1.66	1.85	1.85	1.85	1.85	1.85	1.85	1.86	1.86	1.86	1.86	/	1.86	1.86	1.86	
	105	TC	4.9	5.2	5.5	5.8	5.5	5.5	5.6	5.9	6.1	6.1	6.1	6.1	/	6.7	6.7	6.7	
		S/T	0.89	1.00	1.00	1.00	0.65	0.80	0.96	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.66	
		INPUT	1.81	1.83	1.84	1.85	1.84	1.84	1.84	1.85	1.85	1.85	1.85	1.85	/	1.86	1.85	1.85	
	115	TC	4.0	4.3	4.6	4.9	4.4	4.4	4.6	4.9	4.9	4.9	4.9	5.0	/	5.4	5.4	5.4	
		S/T	0.97	1.00	1.00	1.00	0.70	0.89	1.00	1.00	0.46	0.63	0.81	0.98	/	0.41	0.57	0.73	
		INPUT	1.72	1.73	1.73	1.74	1.73	1.73	1.73	1.74	1.74	1.74	1.74	1.74	/	1.74	1.74	1.74	
	125	TC	3.8	4.1	4.4	4.7	4.1	4.2	4.4	4.7	4.6	4.6	4.6	4.7	/	5.1	5.1	5.1	
		S/T	1.00	1.00	1.00	1.00	0.72	0.92	1.00	1.00	0.46	0.65	0.84	1.00	/	0.42	0.59	0.76	
		INPUT	1.88	1.89	1.90	1.91	1.90	1.90	1.90	1.91	1.91	1.91	1.91	1.91	/	1.92	1.92	1.92	
690	75	TC	5.5	6.1	7.0	7.4	7.2	7.2	7.2	7.4	7.9	7.9	7.9	7.9	/	8.7	8.7	8.7	
		S/T	0.89	1.00	1.00	1.00	0.62	0.76	0.89	1.00	0.44	0.57	0.69	0.81	/	0.40	0.51	0.63	
		INPUT	1.23	1.33	1.49	1.49	1.49	1.49	1.49	1.49	1.48	1.48	1.48	1.48	/	1.47	1.46	1.46	
	85	TC	5.5	6.1	6.7	7.1	6.9	6.9	6.9	7.1	7.6	7.6	7.6	7.6	/	8.3	8.3	8.3	
		S/T	0.89	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.57	0.70	0.83	/	0.40	0.52	0.64	
		INPUT	1.45	1.57	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	1.68	/	1.67	1.67	1.67	
	95	TC	5.5	6.0	6.5	6.9	6.6	6.6	6.6	6.9	7.2	7.2	7.2	7.2	/	7.9	7.9	7.9	
		S/T	0.90	1.00	1.00	1.00	0.64	0.79	0.93	1.00	0.44	0.58	0.72	0.85	/	0.40	0.53	0.65	
		INPUT	1.70	1.85	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	1.88	/	1.89	1.89	1.88	
	105	TC	5.1	5.4	5.7	6.1	5.6	5.6	5.7	6.1	6.2	6.2	6.2	6.3	/	6.8	6.8	6.8	
		S/T	0.92	1.00	1.00	1.00	0.67	0.84	1.00	1.00	0.45	0.61	0.76	0.92	/	0.41	0.55	0.69	
		INPUT	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.87	1.87	1.87	/	1.88	1.88	1.88	
	115	TC	4.2	4.5	4.8	5.1	4.5	4.5	4.8	5.1	5.0	5.0	5.0	5.1	/	5.5	5.5	5.5	
		S/T	1.00	1.00	1.00	1.00	0.73	0.94	1.00	1.00	0.46	0.66	0.85	1.00	/	0.42	0.60	0.78	
		INPUT	1.74	1.75	1.76	1.76	1.75	1.75	1.76	1.76	1.76	1.76	1.76	1.76	/	1.76	1.76	1.76	
	125	TC	3.9	4.2	4.5	4.8	4.2	4.2	4.5	4.8	4.6	4.6	4.7	4.9	/	5.1	5.1	5.1	
		S/T	1.00	1.00	1.00	1.00	0.75	0.97	1.00	1.00	0.47	0.68	0.89	1.00	/	0.42	0.62	0.81	
		INPUT	1.91	1.92	1.93	1.94	1.92	1.92	1.93	1.94	1.94	1.94	1.94	1.94	/	1.95	1.95	1.94	
960	75	TC	6.9	7.3	7.7	8.2	7.6	7.6	7.7	8.2	8.3	8.3	8.3	8.4	/	9.1	9.1	9.1	
		S/T	0.92	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.60	0.76	0.92	/	0.41	0.55	0.69	
		INPUT	1.52	1.52	1.51	1.51	1.52	1.52	1.51	1.51	1.50	1.50	1.50	1.50	/	1.49	1.49	1.48	
	85	TC	6.6	7.0	7.4	7.9	7.2	7.2	7.4	7.9	7.9	8.0	8.0	8.0	/	8.7	8.7	8.7	
		S/T	0.94	1.00	1.00	1.00	0.68	0.85	1.00	1.00	0.45	0.61	0.78	0.94	/	0.41	0.56	0.71	
		INPUT	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	1.71	/	1.70	1.70	1.70	
	95	TC	6.3	6.7	7.1	7.6	6.9	6.9	7.1	7.6	7.6	7.6	7.6	7.6	/	8.3	8.3	8.3	
		S/T	0.96	1.00	1.00	1.00	0.69	0.87	1.00	1.00	0.45	0.62	0.80	0.96	/	0.41	0.57	0.72	
		INPUT	1.90	1.91	1.91	1.92	1.91	1.91	1.91	1.92	1.92	1.92	1.92	1.92	/	1.92	1.92	1.92	
	105	TC	5.5	5.9	6.3	6.7	5.9	5.9	6.3	6.7	6.5	6.5	6.5	6.7	/	7.1	7.1	7.1	
		S/T	1.00	1.00	1.00	1.00	0.73	0.95	1.00	1.00	0.47	0.66	0.86	1.00	/	0.42	0.60	0.79	
		INPUT	1.90	1.90	1.91	1.91	1.90	1.90	1.91	1.91	1.91	1.91	1.91	1.91	/	1.91	1.91	1.91	
	115	TC	4.5	4.8	5.2	5.5	4.6	4.8	5.2	5.5	5.1	5.1	5.2	5.6	/	5.6	5.6	5.7	
		S/T	1.00	1.00	1.00	1.00	0.81	1.00	1.00	1.00	0.49	0.74	0.98	1.00	/	0.44	0.67	0.90	
		INPUT	1.78	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	/	1.79	1.79	1.79	
	125	TC	4.2	4.5	4.9	5.2	4.3	4.5	4.9	5.2	4.8	4.8	4.9	5.2	/	5.2	5.3	5.3	
		S/T	1.00	1.00	1.00	1.00	0.84	1.00	1.00	1.00	0.50	0.76	1.00	1.00	/	0.45	0.69	0.94	
		INPUT	1.95	1.97	1.97	1.98	1.96	1.97	1.97	1.98	1.97	1.97	1.97	1.98	/	1.98	1.98	1.98	
1050	75	TC	7.0	7.4	7.9	8.4	7.7	7.7	7.9	8.4	8.4	8.4	8.5	8.5	/	9.2	9.3	9.3	
		S/T	0.94	1.00	1.00	1.00	0.68	0.86	1.00	1.00	0.45	0.62	0.78	0.95	/	0.41	0.56	0.71	
		INPUT	1.52	1.52	1.51	1.50	1.51	1.51	1.51	1.50	1.50	1.50	1.50	1.50	/	1.48	1.48	1.48	
	85	TC	6.7	7.2	7.6	8.1	7.3	7.3	7.6	8.1	8.0	8.1	8.1	8.2	/	8.8	8.8	8.8	
		S/T	0.96	1.00	1.00	1.00	0.69	0.88	1.00	1.00	0.46	0.63	0.80	0.97	/	0.41	0.57	0.73	
		INPUT	1.71	1.71	1.71	1.70	1.71	1.71	1.71	1.70	1.71	1.71	1.71	1.70	/	1.70	1.70	1.69	
	95	TC	6.4	6.9	7.3	7.8	7.0	7.0	7.3	7.8	7.6	7.7	7.7	7.8	/	8.4	8.4	8.4	
		S/T	0.98	1.00	1.00	1.00	0.70	0.90	1.00	1.00	0.46	0.64	0.82	0.99	/	0.42	0.58	0.75	
		INPUT	1.91	1.91	1.92	1.92	1.91	1.91	1.92	1.92	1.92	1.92	1.92	1.92	/	1.92	1.92	1.92	
	105	TC	5.6	6.0	6.4	6.8	5.9	6.0	6.4	6.9	6.5	6.5	6.6	6.9	/	7.2	7.2	7.2	
		S/T	1.00	1.00	1.00	1.00	0.75	0.98	1.00	1.00	0.47	0.68	0.90	1.00	/	0.43	0.62	0.82	
		INPUT	1.90	1.90	1.91	1.91	1.90	1.90	1.91	1.91	1.91	1.91	1.91	1.91	/	1.91	1.91	1.91	
	115	TC	4.6	4.9	5.3	5.7	4.7	4.9	5.3	5.7	5.2	5.2	5.3	5.7	/	5.7	5.7	5.7	
		S/T	1.00	1.00	1.00	1.00	0.84	1.00	1.00	1.00	0.50	0.76	1.00	1.00	/	0.45	0.69	0.94	
		INPUT	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	/	1.79	1.79	1.79	
	125	TC	4.3	4.6	5.0	5.3	4.4	4.6	5.0	5.3	4.8	4.8	5.0	5.3	/	5.3	5.3	5.3	
		S/T	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	0.51	0.79	1.00	1.00	/	0.46	0.72	0.97	
		INPUT	1.96	1.97	1.97	1.98	1.96	1.97	1.97	1.98	1.97	1.97	1.97	1.98	/	1.98	1.98	1.98	

TC-Total Capacity

S/T-Sensible Heat/Total Capacity

INPUT: Total Sys. Kw

TZID36H520ZA+TZID36H520ZC for Cooling

Indoor Airflow(SCFM)	OD DB(°F)	ID WB(°F)	57				62				67				72			
		ID DB(°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
650	75	TC	5.30	5.80	6.70	7.61	7.52	7.53	7.55	7.74	9.93	9.96	9.98	10.00	/	11.12	11.13	11.13
		S/T	0.89	1.00	1.00	1.00	0.61	0.73	0.86	0.97	0.44	0.54	0.63	0.73	/	0.40	0.49	0.57
		INPUT	1.19	1.27	1.44	1.62	1.60	1.60	1.61	1.65	2.14	2.15	2.16	2.16	/	2.24	2.24	2.24
	85	TC	5.29	5.79	6.69	7.59	7.49	7.51	7.52	7.72	9.75	9.75	9.76	9.76	/	10.71	10.72	10.73
		S/T	0.89	1.00	1.00	1.00	0.61	0.73	0.86	0.97	0.44	0.54	0.64	0.73	/	0.40	0.49	0.58
		INPUT	1.40	1.51	1.71	1.93	1.90	1.91	1.91	1.97	2.49	2.49	2.49	2.49	/	2.52	2.52	2.52
	95	TC	5.27	5.77	6.68	7.57	7.45	7.47	7.48	7.68	9.35	9.35	9.36	9.36	/	10.27	10.28	10.29
		S/T	0.89	1.00	1.00	1.00	0.61	0.74	0.86	0.97	0.44	0.54	0.64	0.74	/	0.40	0.49	0.58
		INPUT	1.67	1.80	2.03	2.28	2.25	2.25	2.26	2.31	2.75	2.75	2.75	2.75	/	2.80	2.80	2.80
	105	TC	5.25	5.76	6.65	7.18	7.05	7.05	7.06	7.19	7.75	7.76	7.77	7.77	/	8.52	8.53	8.54
		S/T	0.89	1.00	1.00	1.00	0.62	0.75	0.88	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	1.94	2.09	2.37	2.46	2.45	2.45	2.45	2.46	2.49	2.49	2.49	2.49	/	2.51	2.51	2.51
	115	TC	5.44	5.61	5.97	6.34	6.01	6.01	6.05	6.35	6.62	6.63	6.63	6.64	/	7.28	7.29	7.29
		S/T	0.88	1.00	1.00	1.00	0.64	0.80	0.95	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.66
		INPUT	2.35	2.36	2.38	2.40	2.38	2.38	2.39	2.40	2.41	2.41	2.41	2.41	/	2.43	2.43	2.43
	125	TC	4.18	4.48	4.80	5.12	4.58	4.59	4.81	5.13	5.05	5.06	5.06	5.14	/	5.57	5.58	5.58
		S/T	0.99	1.00	1.00	1.00	0.71	0.91	1.00	1.00	0.46	0.64	0.83	1.00	/	0.42	0.58	0.75
		INPUT	2.09	2.11	2.12	2.13	2.11	2.11	2.12	2.13	2.13	2.13	2.13	2.13	/	2.15	2.14	2.14
850	75	TC	6.37	7.15	8.27	9.38	8.98	9.01	9.03	9.42	10.73	10.74	10.75	10.75	/	11.76	11.78	11.79
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.87	0.98	0.44	0.55	0.66	0.77	/	0.40	0.50	0.60
		INPUT	1.44	1.59	1.82	2.08	1.98	1.99	1.99	2.08	2.29	2.29	2.29	2.29	/	2.31	2.31	2.31
	85	TC	6.35	7.13	8.25	9.35	8.93	8.96	8.98	9.38	10.31	10.32	10.33	10.33	/	11.30	11.32	11.33
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	0.99	0.44	0.56	0.67	0.78	/	0.40	0.50	0.61
		INPUT	1.70	1.88	2.17	2.47	2.35	2.36	2.36	2.47	2.56	2.56	2.56	2.56	/	2.60	2.60	2.60
	95	TC	6.32	7.11	8.22	9.16	8.88	8.90	8.92	9.16	9.86	9.87	9.88	9.88	/	10.81	10.83	10.83
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	2.01	2.22	2.54	2.80	2.75	2.76	2.76	2.80	2.84	2.84	2.84	2.84	/	2.88	2.88	2.88
	105	TC	6.29	6.93	7.37	7.83	7.36	7.36	7.42	7.84	8.09	8.10	8.10	8.12	/	8.88	8.89	8.89
		S/T	0.91	1.00	1.00	1.00	0.65	0.81	0.96	1.00	0.45	0.59	0.73	0.88	/	0.40	0.54	0.67
		INPUT	2.33	2.51	2.53	2.54	2.53	2.53	2.53	2.54	2.55	2.55	2.55	2.55	/	2.58	2.58	2.58
	115	TC	5.67	6.03	6.44	6.86	6.22	6.23	6.45	6.87	6.85	6.86	6.86	6.92	/	7.52	7.53	7.54
		S/T	0.96	1.00	1.00	1.00	0.69	0.87	1.00	1.00	0.45	0.62	0.79	0.96	/	0.41	0.57	0.72
		INPUT	2.42	2.44	2.46	2.48	2.45	2.45	2.46	2.48	2.48	2.48	2.48	2.48	/	2.50	2.50	2.50
	125	TC	4.42	4.76	5.11	5.47	4.68	4.76	5.12	5.47	5.16	5.17	5.20	5.48	/	5.69	5.70	5.70
		S/T	1.00	1.00	1.00	1.00	0.77	1.00	1.00	1.00	0.48	0.70	0.92	1.00	/	0.43	0.63	0.84
		INPUT	2.16	2.18	2.19	2.20	2.17	2.18	2.19	2.20	2.19	2.19	2.19	2.20	/	2.20	2.20	2.20
920	75	TC	6.71	7.59	8.77	9.95	9.43	9.47	9.49	9.96	10.88	10.90	10.90	10.91	/	11.93	11.94	11.95
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	0.99	0.44	0.56	0.67	0.79	/	0.40	0.50	0.61
		INPUT	1.53	1.70	1.96	2.24	2.11	2.12	2.13	2.24	2.31	2.31	2.31	2.31	/	2.33	2.33	2.33
	85	TC	6.68	7.57	8.75	9.74	9.38	9.41	9.43	9.74	10.45	10.46	10.47	10.48	/	11.45	11.47	11.48
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	1.80	2.02	2.33	2.56	2.50	2.51	2.51	2.56	2.59	2.59	2.59	2.59	/	2.62	2.62	2.62
	95	TC	6.65	7.54	8.71	9.39	9.10	9.11	9.12	9.41	9.98	10.00	10.01	10.01	/	10.95	10.96	10.97
		S/T	0.92	1.00	1.00	1.00	0.62	0.76	0.90	1.00	0.44	0.57	0.69	0.82	/	0.40	0.51	0.63
		INPUT	2.12	2.37	2.72	2.83	2.82	2.82	2.82	2.83	2.86	2.86	2.86	2.86	/	2.91	2.91	2.91
	105	TC	6.61	7.08	7.54	8.01	7.43	7.44	7.54	8.02	8.17	8.18	8.18	8.21	/	8.96	8.97	8.98
		S/T	0.92	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.60	0.75	0.91	/	0.41	0.55	0.69
		INPUT	2.45	2.53	2.55	2.57	2.55	2.55	2.55	2.57	2.58	2.58	2.58	2.58	/	2.60	2.60	2.60
	115	TC	5.74	6.15	6.57	7.00	6.27	6.29	6.58	7.01	6.90	6.91	6.92	7.01	/	7.58	7.59	7.59
		S/T	0.98	1.00	1.00	1.00	0.70	0.90	1.00	1.00	0.46	0.64	0.82	0.99	/	0.41	0.58	0.74
		INPUT	2.45	2.47	2.49	2.50	2.47	2.47	2.49	2.50	2.50	2.50	2.50	2.50	/	2.52	2.52	2.52
	125	TC	4.48	4.83	5.19	5.56	4.70	4.84	5.20	5.56	5.19	5.20	5.24	5.57	/	5.71	5.72	5.73
		S/T	1.00	1.00	1.00	1.00	0.79	1.00	1.00	1.00	0.48	0.72	0.95	1.00	/	0.44	0.65	0.87
		INPUT	2.18	2.20	2.21	2.22	2.19	2.20	2.21	2.22	2.21	2.21	2.21	2.22	/	2.22	2.22	2.22
1150	75	TC	7.76	8.90	10.17	10.77	10.30	10.31	10.35	10.79	11.28	11.30	11.31	11.31	/	12.34	12.36	12.38
		S/T	0.93	1.00	1.00	1.00	0.63	0.78	0.93	1.00	0.44	0.58	0.71	0.84	/	0.40	0.52	0.65
		INPUT	1.82	2.07	2.36	2.37	2.36	2.36	2.36	2.37	2.39	2.39	2.39	2.39	/	2.41	2.41	2.41
	85	TC	7.72	8.87	9.83	10.41	9.87	9.88	9.93	10.43	10.81	10.83	10.84	10.85	/	11.84	11.86	11.87
		S/T	0.93	1.00	1.00	1.00	0.64	0.79	0.94	1.00	0.45	0.58	0.72	0.86	/	0.40	0.53	0.66
		INPUT	2.14	2.44	2.64	2.66	2.64	2.64	2.64	2.66	2.67	2.67	2.67	2.67	/	2.70	2.70	2.70
	95	TC	7.67	8.83	9.45	10.02	9.41	9.42	9.50	10.04	10.31	10.33	10.34	10.35	/	11.30	11.32	11.33
		S/T	0.93	1.00	1.00	1.00	0.65	0.81	0.97	1.00	0.45	0.59	0.74	0.88	/	0.40	0.54	0.67
		INPUT	2.49	2.84	2.91	2.93	2.90	2.90	2.91	2.93	2.95	2.95	2.95	2.95	/	2.99	2.99	2.99
	105	TC	6.98	7.46	7.96	8.47	7.62	7.64	7.97	8.48	8.36	8.38	8.38	8.50	/	9.17	9.18	9.19
		S/T	0.98	1.00	1.00	1.00	0.70	0.89	1.00	1.00	0.46	0.64	0.81	0.98	/	0.41	0.58	0.74
		INPUT	2.60	2.62	2.64	2.65	2.63	2.63	2.64	2.65	2.65	2.65	2.65	2.65	/	2.67	2.67	2.67
	115	TC	6.00	6.44	6.89	7.36	6.39	6.45	6.90	7.36	7.02	7.04	7.06	7.37	/	7.71	7.72	7.73
		S/T	1.00	1.00	1.00	1.00	0.75	0.97	1.00	1.00	0.47	0.68	0.89	1.00	/	0.43	0.62	0.81
		INPUT	2.53	2.55	2.57	2.58	2.55	2.55	2.57	2.58	2.57	2.57	2.57	2.58	/	2.59	2.59	2.59
	125	TC	4.63	5.00	5.39	5.78	4.74	5.01	5.39	5.78	5.23	5.24	5.40	5.79	/	5.76	5.77	5.82
		S/T	1.00	1.00	1.00	1.00	0.86	1.00	1.00	1.00	0.50	0.78	1.00	1.00	/	0.46	0.71	0.96
		INPUT	2.26	2.27	2.28	2.29	2.26	2.27	2.28	2.29	2.28	2.28	2.28	2.29	/	2.29	2.29	2.29
1250SCFM	75	TC	8.19	9.44	10.42	11.03	10.44	10.45	10.52	11.05	11.43	11.45	11.46	11.47	/	12.50	12.52	12.53
		S/T	0.94	1.00	1.00	1.00	0.64	0.80	0.95	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.66
		INPUT	1.93	2.22	2.38	2.40	2.38	2.38	2.39	2.40	2.41	2.41	2.41	2.41	/	2.43	2.43	2.43
	85	TC	8.15	9.40	10.06	10.66	10.00	10.01	10.10	10.67	10.95	10.96	10.97	11.00	/	11.98	12.00	12.01
		S/T	0.94	1.00	1.00	1.00	0.65	0.81	0.97	1.00	0.45	0.59	0.74	0.89	/	0.41	0.54	0.68
		INPUT	2.27	2.61	2.66	2.68	2.66	2.66	2.66	2.68	2.69	2.69	2.69	2.69	/	2.72	2.72	2.72
	95	TC	8.09	9.09	9.67	10.26	9.52	9.53	9.67	10.27	10.43	10.45	10.46	10.49	/	11.42	11.44	11.46
		S/T	0.94	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.60	0.76	0.91	/	0.41	0.55	0.69
		INPUT	2.64	2.91	2.93	2.96	2.93	2.93	2.93	2.96	2.97	2.97	2.97	2.97	/	3.01	3.01	3.01
	105	TC	7.10	7.60	8.12	8.65	7.69	7.72	8.13	8.66	8.44	8.45	8.46	8.67	/	9.25	9.26	9.27
		S/T	1.00	1.00	1.00	1.00	0.72	0.92	1.00	1.00	0.46	0.65	0.84	1.00	/	0.42	0.59	0.77
		INPUT	2.62	2.64	2.66	2.68	2.65	2.65	2.66	2.68	2.67	2.67	2.67	2.68	/	2.69	2.69	2.69
	115	TC	6.09	6.55	7.01	7.49	6.44	6.55	7.02	7.50	7.07	7.08	7.12	7.51	/	7.76	7.77	7.78
		S/T	1.00	1.00	1.00	1.00	0.77	1.00	1.00	1.00	0.48	0.70	0.93	1.00	/	0.43	0.64	0.85
		INPUT	2.55	2.57	2.59	2.60	2.57	2.57	2.59	2.60	2.59	2.59	2.59	2.60	/	2.61	2.61	2.61
	125	TC	4.68	5.07	5.46	5.86	4.77	5.07	5.46	5.87	5.25	5.26	5.47	5.87	/	5.78	5.79	5.87
		S/T	1.00	1.00	1.00	1.00	0.89	1.00	1.00	1.00	0.51	0.81	1.00	1.00	/	0.46	0.74	0.99
		INPUT	2.28	2.29	2.30	2.31	2.28	2.29	2.30	2.31	2.30	2.30	2.30	2.31	/	2.31	2.31	2.31

TC-Total Capacity

S/T-Sensible Heat/Total Capacity

INPUT: Total Sys. Kw

TZID48H520ZA+TZID60H520ZC for Cooling

Indoor Airflow(SCFM)	OD DB(°F)	ID WB(°F)	57				62				67				72			
		ID DB(°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1050	75	TC	8.78	9.57	11.02	12.45	12.24	12.26	12.28	12.61	14.77	14.77	14.77	14.78	/	16.12	16.12	16.12
		S/T	0.89	1.00	1.00	1.00	0.61	0.74	0.87	0.98	0.44	0.55	0.65	0.76	/	0.40	0.50	0.59
		INPUT	1.95	2.13	2.47	2.84	2.78	2.78	2.79	2.88	3.33	3.33	3.33	3.33	/	3.38	3.38	3.38
	85	TC	8.73	9.53	10.97	12.39	12.15	12.16	12.19	12.52	14.20	14.20	14.20	14.20	/	15.49	15.49	15.49
		S/T	0.89	1.00	1.00	1.00	0.61	0.74	0.87	0.98	0.44	0.55	0.66	0.77	/	0.40	0.50	0.60
		INPUT	2.34	2.55	2.94	3.36	3.28	3.29	3.30	3.40	3.71	3.71	3.70	3.70	/	3.77	3.77	3.77
	95	TC	8.67	9.49	10.92	12.33	12.03	12.05	12.08	12.43	13.58	13.58	13.58	13.58	/	14.81	14.81	14.81
		S/T	0.90	1.00	1.00	1.00	0.61	0.74	0.87	0.99	0.44	0.56	0.67	0.79	/	0.40	0.50	0.61
		INPUT	2.77	3.02	3.47	3.95	3.84	3.85	3.86	3.98	4.10	4.10	4.10	4.10	/	4.18	4.18	4.18
	105	TC	8.61	9.44	10.85	11.99	11.83	11.83	11.83	12.01	12.93	12.93	12.93	12.93	/	14.10	14.10	14.09
		S/T	0.90	1.00	1.00	1.00	0.62	0.75	0.88	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	3.25	3.54	4.06	4.44	4.43	4.43	4.43	4.44	4.52	4.52	4.52	4.52	/	4.61	4.61	4.60
	115	TC	7.93	8.32	8.84	9.37	8.68	8.68	8.85	9.38	9.51	9.50	9.49	9.53	/	10.37	10.36	10.35
		S/T	0.93	1.00	1.00	1.00	0.68	0.85	1.00	1.00	0.45	0.61	0.78	0.94	/	0.41	0.56	0.71
		INPUT	3.49	3.51	3.54	3.56	3.53	3.53	3.54	3.56	3.57	3.57	3.57	3.57	/	3.61	3.60	3.60
	125	TC	6.05	6.48	6.92	7.36	6.44	6.50	6.93	7.37	7.08	7.07	7.08	7.38	/	7.75	7.72	7.71
		S/T	1.00	1.00	1.00	1.00	0.76	0.99	1.00	1.00	0.47	0.69	0.91	1.00	/	0.43	0.63	0.83
		INPUT	3.04	3.06	3.08	3.09	3.06	3.06	3.08	3.09	3.09	3.08	3.08	3.09	/	3.10	3.10	3.10
1250	75	TC	9.87	10.96	12.61	14.15	13.67	13.69	13.74	14.17	15.24	15.24	15.25	15.25	/	16.63	16.63	16.63
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	2.28	2.54	2.96	3.37	3.25	3.26	3.27	3.37	3.42	3.42	3.42	3.42	/	3.47	3.46	3.46
	85	TC	9.81	10.91	12.55	13.69	13.40	13.40	13.41	13.71	14.63	14.63	14.63	14.63	/	15.94	15.94	15.93
		S/T	0.91	1.00	1.00	1.00	0.62	0.76	0.89	1.00	0.44	0.57	0.69	0.82	/	0.40	0.51	0.63
		INPUT	2.71	3.01	3.49	3.75	3.74	3.74	3.74	3.75	3.80	3.80	3.80	3.80	/	3.86	3.86	3.86
	95	TC	9.73	10.84	12.47	13.19	12.79	12.79	12.82	13.21	13.97	13.97	13.96	13.96	/	15.21	15.21	15.20
		S/T	0.91	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.57	0.70	0.83	/	0.40	0.52	0.64
		INPUT	3.18	3.54	4.09	4.15	4.12	4.12	4.12	4.15	4.20	4.20	4.20	4.20	/	4.27	4.27	4.27
	105	TC	9.63	10.77	11.99	12.66	12.15	12.15	12.20	12.68	13.27	13.27	13.27	13.27	/	14.45	14.45	14.44
		S/T	0.92	1.00	1.00	1.00	0.64	0.79	0.93	1.00	0.44	0.58	0.72	0.86	/	0.40	0.53	0.65
		INPUT	3.70	4.13	4.52	4.57	4.53	4.53	4.53	4.57	4.62	4.62	4.62	4.62	/	4.70	4.70	4.70
	115	TC	8.12	8.67	9.22	9.78	8.82	8.84	9.23	9.80	9.66	9.65	9.65	9.81	/	10.54	10.51	10.50
		S/T	0.99	1.00	1.00	1.00	0.71	0.91	1.00	1.00	0.46	0.65	0.83	1.00	/	0.42	0.59	0.76
		INPUT	3.57	3.60	3.63	3.65	3.61	3.61	3.63	3.65	3.65	3.65	3.65	3.65	/	3.68	3.68	3.68
	125	TC	6.23	6.69	7.15	7.61	6.49	6.70	7.16	7.62	7.15	7.12	7.18	7.63	/	7.81	7.77	7.78
		S/T	1.00	1.00	1.00	1.00	0.81	1.00	1.00	1.00	0.49	0.74	0.98	1.00	/	0.44	0.67	0.91
		INPUT	3.12	3.14	3.15	3.17	3.13	3.14	3.15	3.17	3.16	3.15	3.16	3.17	/	3.17	3.17	3.17
1500	75	TC	11.05	12.51	14.15	14.93	14.33	14.33	14.38	14.95	15.63	15.63	15.63	15.63	/	17.03	17.03	17.03
		S/T	0.92	1.00	1.00	1.00	0.64	0.78	0.93	1.00	0.44	0.58	0.72	0.85	/	0.40	0.53	0.65
		INPUT	2.70	3.07	3.49	3.52	3.49	3.49	3.50	3.52	3.55	3.54	3.54	3.54	/	3.59	3.59	3.59
	85	TC	10.96	12.44	13.66	14.42	13.72	13.73	13.80	14.45	14.97	14.97	14.97	14.99	/	16.29	16.29	16.29
		S/T	0.93	1.00	1.00	1.00	0.64	0.80	0.95	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.66
		INPUT	3.17	3.60	3.86	3.90	3.87	3.87	3.87	3.90	3.93	3.93	3.93	3.93	/	3.99	3.99	3.99
	95	TC	10.85	12.34	13.12	13.87	13.08	13.08	13.19	13.89	14.27	14.27	14.27	14.29	/	15.53	15.52	15.52
		S/T	0.93	1.00	1.00	1.00	0.65	0.81	0.97	1.00	0.45	0.60	0.74	0.89	/	0.40	0.54	0.68
		INPUT	3.68	4.19	4.26	4.31	4.26	4.26	4.26	4.31	4.33	4.33	4.33	4.33	/	4.41	4.40	4.40
	105	TC	10.72	11.85	12.56	13.29	12.41	12.40	12.57	13.31	13.54	13.53	13.53	13.57	/	14.73	14.72	14.71
		S/T	0.94	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.61	0.76	0.92	/	0.41	0.55	0.70
		INPUT	4.26	4.62	4.68	4.73	4.67	4.67	4.68	4.74	4.76	4.75	4.75	4.76	/	4.84	4.84	4.84
	115	TC	8.38	8.96	9.55	10.15	8.91	8.99	9.56	10.16	9.76	9.74	9.76	10.17	/	10.64	10.61	10.60
		S/T	1.00	1.00	1.00	1.00	0.75	0.98	1.00	1.00	0.47	0.69	0.90	1.00	/	0.43	0.63	0.83
		INPUT	3.70	3.73	3.76	3.78	3.73	3.73	3.76	3.78	3.77	3.77	3.77	3.78	/	3.80	3.80	3.79
	125	TC	6.36	6.84	7.32	7.81	6.50	6.85	7.33	7.82	7.16	7.12	7.34	7.83	/	7.83	7.78	7.84
		S/T	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	0.51	0.80	1.00	1.00	/	0.46	0.73	0.99
		INPUT	3.24	3.26	3.27	3.28	3.25	3.26	3.27	3.28	3.27	3.27	3.27	3.28	/	3.29	3.28	3.28
1600	75	TC	11.49	13.07	14.37	15.18	14.43	14.43	14.52	15.20	15.74	15.74	15.74	15.75	/	17.14	17.14	17.14
		S/T	0.93	1.00	1.00	1.00	0.64	0.80	0.95	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.67
		INPUT	2.88	3.30	3.55	3.58	3.56	3.56	3.56	3.58	3.61	3.61	3.61	3.61	/	3.65	3.65	3.65
	85	TC	11.39	12.99	13.87	14.66	13.82	13.82	13.94	14.68	15.07	15.07	15.07	15.10	/	16.40	16.39	16.39
		S/T	0.93	1.00	1.00	1.00	0.65	0.81	0.97	1.00	0.45	0.60	0.74	0.89	/	0.40	0.54	0.68
		INPUT	3.36	3.84	3.93	3.97	3.93	3.93	3.93	3.97	3.99	3.99	3.99	3.99	/	4.05	4.05	4.05
	95	TC	11.27	12.57	13.32	14.08	13.16	13.16	13.33	14.10	14.36	14.35	14.35	14.39	/	15.62	15.61	15.60
		S/T	0.94	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.60	0.76	0.92	/	0.41	0.55	0.69
		INPUT	3.89	4.28	4.33	4.38	4.32	4.32	4.33	4.38	4.40	4.40	4.39	4.40	/	4.47	4.47	4.47
	105	TC	11.13	12.01	12.74	13.48	12.47	12.47	12.76	13.50	13.61	13.60	13.60	13.67	/	14.80	14.79	14.78
		S/T	0.94	1.00	1.00	1.00	0.68	0.85	1.00	1.00	0.45	0.62	0.78	0.94	/	0.41	0.56	0.71
		INPUT	4.49	4.70	4.75	4.81	4.73	4.73	4.75	4.81	4.82	4.82	4.82	4.82	/	4.91	4.90	4.90
	115	TC	8.45	9.04	9.64	10.25	8.92	9.05	9.65	10.26	9.77	9.75	9.78	10.27	/	10.65	10.62	10.61
		S/T	1.00	1.00	1.00	1.00	0.77	1.00	1.00	1.00	0.48	0.70	0.93	1.00	/	0.43	0.64	0.85
		INPUT	3.76	3.79	3.82	3.84	3.79	3.79	3.82	3.84	3.83	3.82	3.82	3.84	/	3.86	3.85	3.85
	125	TC	6.39	6.87	7.36	7.85	6.49	6.88	7.37	7.86	7.14	7.11	7.38	7.87	/	7.82	7.76	7.88
		S/T	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.52	0.82	1.00	1.00	/	0.47	0.75	1.00
		INPUT	3.30	3.32	3.33	3.34	3.30	3.32	3.33	3.34	3.33	3.32	3.33	3.34	/	3.34	3.34	3.34
1750	75	TC	12.10	13.83	14.66	15.49	14.55	14.55	14.70	15.51	15.87	15.86	15.86	15.90	/	17.28	17.27	17.27
		S/T	0.94	1.00	1.00	1.00	0.66	0.82	0.98	1.00	0.45	0.60	0.75	0.90	/	0.41	0.55	0.69
		INPUT	3.16	3.63	3.67	3.70	3.66	3.66	3.67	3.70	3.72	3.71	3.71	3.71	/	3.76	3.76	3.76
	85	TC	11.98	13.33	14.13	14.94	13.92	13.92	14.14	14.96	15.18	15.17	15.17	15.23	/	16.51	16.50	16.49
		S/T	0.94	1.00	1.00	1.00	0.67	0.84	1.00	1.00	0.45	0.61	0.77	0.93	/	0.41	0.55	0.70
		INPUT	3.66	4.01	4.05	4.09	4.04	4.04	4.05	4.09	4.10	4.10	4.10	4.10	/	4.16	4.16	4.16
	95	TC	11.84	12.78	13.56	14.35	13.24	13.24	13.57	14.36	14.44	14.44	14.43	14.52	/	15.71	15.70	15.69
		S/T	0.95	1.00	1.00	1.00	0.68	0.86	1.00	1.00	0.45	0.62	0.79	0.95	/	0.41	0.56	0.72
		INPUT	4.22	4.40	4.45	4.50	4.43	4.43	4.45	4.50	4.51	4.51	4.51	4.51	/	4.58	4.58	4.58
	105	TC	11.52	12.20	12.95	13.71	12.53	12.54	12.97	13.73	13.68	13.67	13.66	13.79	/	14.88	14.86	14.85
		S/T	0.96	1.00	1.00	1.00	0.69	0.88	1.00	1.00	0.46	0.63	0.81	0.98	/	0.41	0.58	0.74
		INPUT	4.76	4.82	4.88	4.93	4.85	4.85	4.88	4.93	4.93	4.93	4.93	4.94	/	5.02	5.01	5.01
	115	TC	8.52	9.12	9.74	10.36	8.90	9.13	9.75	10.37	9.76	9.74	9.80	10.38	/	10.64	10.61	10.61
		S/T	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00	0.49	0.73	0.97	1.00	/	0.44	0.67	0.89
		INPUT	3.87	3.90	3.93	3.95	3.89	3.90	3.93	3.95	3.93	3.93	3.93	3.95	/	3.96	3.96	3.95
	125	TC	6.39	6.88	7.38	7.89	6.45	6.89	7.39	7.89	7.10	7.06	7.40	7.90	/	7.77	7.71	7.91
		S/T	1.00	1.00	1.00	1.00	0.93	1.00	1.00	1.00	0.53	0.86	1.00	1.00	/	0.48	0.78	1.00
		INPUT	3.40	3.42	3.43	3.44	3.41	3.42	3.43	3.44	3.43	3.43	3.43	3.44	/	3.45	3.44	3.44

TC-Total Capacity

S/T-Sensible Heat/Total Capacity

INPUT: Total Sys. Kw

TZID60H520ZA+TZID60H520ZC for Cooling

Indoor Airflow(SCFM)	OD DB(℉)	ID WB(℉)	57				62				67				72			
		ID DB(℉)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1050	75	TC	8.8	9.6	11.0	12.5	12.2	12.3	12.3	12.6	15.9	16.0	16.0	16.0	/	18.0	18.0	18.0
		S/T	0.89	1.00	1.00	1.00	0.61	0.74	0.87	0.98	0.44	0.54	0.64	0.74	/	0.40	0.49	0.58
		INPUT	1.95	2.13	2.47	2.84	2.78	2.79	2.79	2.88	3.83	3.85	3.85	3.86	/	4.15	4.15	4.15
	85	TC	8.7	9.5	11.0	12.4	12.2	12.2	12.2	12.5	15.8	15.8	15.9	15.9	/	18.0	18.0	18.0
		S/T	0.89	1.00	1.00	1.00	0.61	0.74	0.87	0.98	0.44	0.54	0.64	0.74	/	0.40	0.49	0.58
		INPUT	2.34	2.58	2.96	3.36	3.29	3.30	3.30	3.40	4.45	4.46	4.47	4.48	/	4.93	4.93	4.93
	95	TC	8.7	9.5	10.9	12.3	12.0	12.1	12.1	12.4	15.6	15.7	15.7	15.7	/	17.3	17.3	17.3
		S/T	0.90	1.00	1.00	1.00	0.61	0.74	0.87	0.99	0.44	0.54	0.64	0.74	/	0.40	0.49	0.58
		INPUT	2.80	3.04	3.48	3.95	3.84	3.85	3.86	3.98	5.16	5.18	5.19	5.20	/	5.41	5.41	5.41
	105	TC	8.6	9.4	10.9	12.3	11.9	11.9	12.0	12.3	13.6	13.6	13.6	13.6	/	14.9	14.9	14.9
		S/T	0.90	1.00	1.00	1.00	0.62	0.75	0.88	0.99	0.44	0.56	0.67	0.79	/	0.40	0.50	0.61
		INPUT	3.27	3.56	4.07	4.60	4.46	4.47	4.49	4.63	4.87	4.87	4.87	4.87	/	4.97	4.97	4.97
	115	TC	8.6	8.9	9.4	10.0	9.4	9.4	9.5	10.0	10.3	10.3	10.3	10.3	/	11.2	11.2	11.2
		S/T	0.90	1.00	1.00	1.00	0.66	0.82	0.98	1.00	0.45	0.60	0.75	0.90	/	0.41	0.54	0.68
		INPUT	3.82	3.84	3.88	3.91	3.88	3.88	3.88	3.91	3.93	3.93	3.93	3.93	/	3.97	3.97	3.97
	125	TC	6.1	6.5	6.9	7.4	6.5	6.5	6.9	7.4	7.1	7.1	7.1	7.4	/	7.8	7.7	7.7
		S/T	1.00	1.00	1.00	1.00	0.76	0.99	1.00	1.00	0.47	0.69	0.91	1.00	/	0.43	0.63	0.83
		INPUT	3.08	3.10	3.11	3.12	3.10	3.10	3.11	3.13	3.12	3.12	3.12	3.13	/	3.14	3.13	3.13
1250	75	TC	9.9	11.0	12.6	14.2	13.7	13.7	13.7	14.3	17.1	17.1	17.1	17.1	/	18.7	18.7	18.7
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.88	0.99	0.44	0.55	0.65	0.76	/	0.40	0.50	0.60
		INPUT	2.28	2.54	2.97	3.42	3.25	3.26	3.28	3.43	4.17	4.17	4.17	4.17	/	4.26	4.26	4.26
	85	TC	9.8	10.9	12.6	14.2	13.6	13.6	13.6	14.2	17.1	17.1	17.1	17.1	/	18.6	18.6	18.6
		S/T	0.91	1.00	1.00	1.00	0.62	0.75	0.89	0.99	0.44	0.55	0.65	0.76	/	0.40	0.50	0.60
		INPUT	2.73	3.03	3.50	4.00	3.80	3.81	3.82	4.01	4.93	4.93	4.93	4.93	/	5.05	5.05	5.05
	95	TC	9.7	10.9	12.5	14.1	13.4	13.4	13.5	14.1	16.3	16.4	16.4	16.4	/	17.8	17.8	17.8
		S/T	0.91	1.00	1.00	1.00	0.62	0.76	0.89	1.00	0.44	0.55	0.66	0.78	/	0.40	0.50	0.60
		INPUT	3.20	3.55	4.08	4.66	4.41	4.42	4.44	4.67	5.40	5.40	5.40	5.40	/	5.54	5.54	5.54
	105	TC	9.6	10.8	12.4	13.2	12.8	12.8	12.9	13.2	14.0	14.0	14.0	14.0	/	15.3	15.3	15.3
		S/T	0.92	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.57	0.70	0.83	/	0.40	0.52	0.64
		INPUT	3.72	4.13	4.75	4.91	4.87	4.87	4.87	4.91	4.97	4.97	4.97	4.97	/	5.07	5.07	5.07
	115	TC	8.8	9.3	9.9	10.4	9.6	9.6	9.9	10.5	10.5	10.5	10.4	10.5	/	11.4	11.4	11.4
		S/T	0.96	1.00	1.00	1.00	0.69	0.88	1.00	1.00	0.45	0.63	0.80	0.97	/	0.41	0.57	0.73
		INPUT	3.91	3.94	3.98	4.01	3.96	3.96	3.98	4.01	4.01	4.01	4.01	4.01	/	4.05	4.05	4.05
	125	TC	6.2	6.7	7.2	7.6	6.5	6.7	7.2	7.6	7.2	7.1	7.2	7.7	/	7.8	7.8	7.8
		S/T	1.00	1.00	1.00	1.00	0.81	1.00	1.00	1.00	0.49	0.74	0.98	1.00	/	0.44	0.67	0.90
		INPUT	3.16	3.18	3.19	3.20	3.17	3.18	3.19	3.20	3.19	3.19	3.19	3.20	/	3.21	3.20	3.20
1500	75	TC	11.1	12.5	14.4	16.2	15.2	15.2	15.3	16.3	17.6	17.6	17.6	17.6	/	19.2	19.2	19.2
		S/T	0.92	1.00	1.00	1.00	0.63	0.77	0.90	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	2.70	3.08	3.60	4.15	3.83	3.84	3.87	4.17	4.31	4.31	4.31	4.31	/	4.40	4.40	4.40
	85	TC	11.0	12.4	14.3	16.1	15.0	15.0	15.1	16.2	17.6	17.6	17.6	17.6	/	19.2	19.2	19.2
		S/T	0.93	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.56	0.68	0.80	/	0.40	0.51	0.62
		INPUT	3.18	3.60	4.18	4.81	4.41	4.42	4.46	4.83	5.09	5.09	5.09	5.09	/	5.21	5.21	5.21
	95	TC	10.9	12.4	14.2	15.8	14.8	14.8	15.0	15.9	16.8	16.8	16.8	16.8	/	18.3	18.3	18.3
		S/T	0.93	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.57	0.69	0.82	/	0.40	0.52	0.63
		INPUT	3.69	4.19	4.85	5.47	5.08	5.10	5.15	5.47	5.56	5.56	5.56	5.56	/	5.70	5.70	5.70
	105	TC	10.7	12.2	13.2	13.9	13.1	13.1	13.2	13.9	14.3	14.3	14.3	14.3	/	15.6	15.6	15.6
		S/T	0.94	1.00	1.00	1.00	0.65	0.81	0.97	1.00	0.45	0.59	0.74	0.89	/	0.40	0.54	0.68
		INPUT	4.26	4.85	5.02	5.08	5.02	5.02	5.02	5.08	5.12	5.11	5.11	5.12	/	5.21	5.21	5.21
	115	TC	9.0	9.6	10.2	10.9	9.7	9.7	10.2	10.9	10.6	10.6	10.6	10.9	/	11.5	11.5	11.5
		S/T	1.00	1.00	1.00	1.00	0.73	0.94	1.00	1.00	0.47	0.66	0.86	1.00	/	0.42	0.60	0.79
		INPUT	4.04	4.08	4.11	4.14	4.08	4.08	4.11	4.14	4.13	4.13	4.13	4.14	/	4.17	4.17	4.17
	125	TC	6.4	6.9	7.3	7.8	6.5	6.9	7.4	7.8	7.2	7.2	7.4	7.9	/	7.9	7.8	7.9
		S/T	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	0.51	0.80	1.00	1.00	/	0.46	0.73	0.99
		INPUT	3.28	3.29	3.31	3.31	3.28	3.29	3.31	3.31	3.31	3.30	3.31	3.31	/	3.32	3.31	3.31
1600	75	TC	11.5	13.1	15.0	16.7	15.7	15.7	15.9	16.8	17.8	17.8	17.8	17.8	/	19.4	19.4	19.4
		S/T	0.93	1.00	1.00	1.00	0.63	0.77	0.91	1.00	0.44	0.57	0.69	0.82	/	0.40	0.52	0.63
		INPUT	2.88	3.30	3.87	4.32	4.07	4.08	4.12	4.32	4.38	4.38	4.38	4.38	/	4.47	4.47	4.47
	85	TC	11.4	13.0	14.9	16.7	15.5	15.6	15.7	16.8	17.8	17.8	17.8	17.8	/	19.3	19.4	19.4
		S/T	0.93	1.00	1.00	1.00	0.63	0.77	0.92	1.00	0.44	0.57	0.69	0.82	/	0.40	0.52	0.63
		INPUT	3.37	3.84	4.47	5.08	4.67	4.68	4.73	5.08	5.16	5.16	5.16	5.16	/	5.29	5.28	5.28
	95	TC	11.3	12.9	14.8	16.1	15.3	15.3	15.5	16.1	17.0	17.0	17.0	17.0	/	18.5	18.5	18.5
		S/T	0.94	1.00	1.00	1.00	0.63	0.78	0.92	1.00	0.44	0.58	0.71	0.84	/	0.40	0.52	0.65
		INPUT	3.90	4.45	5.17	5.55	5.36	5.38	5.45	5.56	5.64	5.63	5.63	5.63	/	5.77	5.77	5.77
	105	TC	11.1	12.6	13.4	14.1	13.2	13.2	13.4	14.1	14.4	14.4	14.4	14.4	/	15.7	15.7	15.7
		S/T	0.94	1.00	1.00	1.00	0.66	0.83	0.99	1.00	0.45	0.60	0.76	0.91	/	0.41	0.55	0.69
		INPUT	4.49	5.03	5.09	5.16	5.08	5.08	5.10	5.16	5.18	5.18	5.18	5.18	/	5.28	5.28	5.28
	115	TC	9.1	9.7	10.3	11.0	9.7	9.8	10.4	11.0	10.6	10.6	10.6	11.0	/	11.6	11.5	11.5
		S/T	1.00	1.00	1.00	1.00	0.74	0.97	1.00	1.00	0.47	0.68	0.89	1.00	/	0.43	0.62	0.81
		INPUT	4.11	4.14	4.17	4.20	4.14	4.14	4.17	4.20	4.19	4.19	4.19	4.20	/	4.23	4.23	4.22
	125	TC	6.4	6.9	7.4	7.9	6.5	6.9	7.4	7.9	7.2	7.1	7.4	7.9	/	7.8	7.8	7.9
		S/T	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.51	0.82	1.00	1.00	/	0.47	0.75	1.00
		INPUT	3.34	3.35	3.36	3.37	3.34	3.35	3.36	3.37	3.36	3.36	3.36	3.37	/	3.38	3.37	3.37
1750	75	TC	12.1	13.9	16.0	17.2	16.5	16.5	16.5	17.2	18.0	18.0	18.0	18.0	/	19.6	19.6	19.6
		S/T	0.94	1.00	1.00	1.00	0.63	0.78	0.93	1.00	0.44	0.58	0.71	0.85	/	0.40	0.53	0.65
		INPUT	3.15	3.63	4.25	4.44	4.40	4.40	4.40	4.44	4.49	4.49	4.49	4.49	/	4.58	4.58	4.58
	85	TC	12.0	13.8	15.8	17.1	16.3	16.3	16.5	17.1	18.0	18.0	18.0	18.0	/	19.6	19.6	19.6
		S/T	0.94	1.00	1.00	1.00	0.64	0.78	0.93	1.00	0.44	0.58	0.71	0.85	/	0.40	0.53	0.65
		INPUT	3.66	4.20	4.90	5.20	5.05	5.07	5.14	5.20	5.27	5.27	5.27	5.27	/	5.40	5.40	5.40
	95	TC	11.9	13.7	15.6	16.5	15.7	15.7	15.8	16.5	17.1	17.1	17.1	17.2	/	18.7	18.7	18.7
		S/T	0.95	1.00	1.00	1.00	0.64	0.80	0.95	1.00	0.45	0.59	0.73	0.87	/	0.40	0.53	0.66
		INPUT	4.21	4.85	5.60	5.69	5.61	5.61	5.62	5.69	5.75	5.75	5.75	5.75	/	5.89	5.89	5.89
	105	TC	11.7	12.8	13.6	14.4	13.3	13.3	13.6	14.4	14.5	14.5	14.5	14.6	/	15.8	15.8	15.8
		S/T	0.96	1.00	1.00	1.00	0.68	0.86	1.00	1.00	0.45	0.62	0.78	0.95	/	0.41	0.56	0.72
		INPUT	4.83	5.15	5.21	5.27	5.19	5.19	5.21	5.28	5.28	5.28	5.28	5.29	/	5.38	5.38	5.38
	115	TC	9.2	9.8	10.5	11.1	9.7	9.8	10.5	11.1	10.6	10.6	10.6	11.2	/	11.6	11.6	11.6
		S/T	1.00	1.00	1.00	1.00	0.77	1.00	1.00	1.00	0.48	0.70	0.92	1.00	/	0.43	0.64	0.85
		INPUT	4.20	4.24	4.27	4.30	4.23	4.24	4.27	4.30	4.28	4.28	4.28	4.30	/	4.32	4.32	4.32
	125	TC	6.4	6.9	7.4	7.9	6.5	6.9	7.4	7.9	7.1	7.1	7.4	7.9	/	7.8	7.8	8.0
		S/T	1.00	1.00	1.00	1.00	0.93	1.00	1.00	1.00	0.53	0.85	1.00	1.00	/	0.48	0.78	1.00
		INPUT	3.43	3.44	3.45	3.46	3.43	3.44	3.45	3.46	3.45	3.45	3.45	3.46	/	3.46	3.46	3.46

TC-Total Capacity

S/T-Sensible Heat/Total Capacity

INPUT: Total Sys. Kw

DETAILED HEATING CAPACITIES

TZID24H520ZA+TZID36H520ZC for Heating

Indoor Airflow(SCFM)	ID DB(℉)	OD DB(℉)	86	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4
550	60	TC	6.1	7.5	8.1	7.6	7.2	6.9	6.5	6.6	6.1	5.7	5.3	4.9	4.6	4.2	4.8	4.4	4.0
		INPUT	0.81	1.34	1.75	1.70	1.66	1.64	1.62	2.08	2.01	2.00	1.94	1.88	1.82	1.77	2.21	2.12	2.02
	70	TC	6.0	7.2	7.4	7.0	6.6	6.2	5.8	6.1	5.7	5.4	5.0	4.7	4.3	4.0	4.5	4.2	3.8
		INPUT	0.94	1.47	1.85	1.81	1.76	1.74	1.71	2.22	2.16	2.16	2.09	2.03	1.96	1.90	2.37	2.27	2.16
	75	TC	5.9	6.6	6.7	6.6	6.2	5.8	5.4	5.9	5.6	5.3	4.9	4.6	4.2	3.9	4.4	4.1	3.7
		INPUT	1.00	1.41	1.55	1.85	1.81	1.78	1.76	2.31	2.25	2.24	2.17	2.10	2.03	1.97	2.44	2.34	2.23
	80	TC	5.8	5.8	5.9	5.9	5.8	5.5	5.0	5.8	5.4	5.1	4.8	4.4	4.1	3.8	4.3	3.9	3.5
		INPUT	1.06	1.33	1.41	1.56	1.85	1.82	1.80	2.40	2.34	2.32	2.25	2.18	2.11	2.04	2.52	2.42	2.30
600	60	TC	6.2	7.6	8.3	7.8	7.4	7.0	6.7	6.8	6.3	5.9	5.4	5.0	4.6	4.3	4.9	4.5	4.0
		INPUT	0.79	1.30	1.73	1.69	1.65	1.63	1.61	2.07	2.00	1.99	1.92	1.86	1.81	1.76	2.19	2.11	2.01
	70	TC	6.0	7.3	7.6	7.2	6.8	6.4	6.0	6.2	5.8	5.5	5.1	4.7	4.4	4.1	4.6	4.2	3.8
		INPUT	0.92	1.44	1.83	1.79	1.75	1.73	1.71	2.19	2.14	2.13	2.07	2.01	1.95	1.89	2.35	2.26	2.15
	75	TC	5.9	7.0	7.2	6.8	6.4	6.0	5.6	6.0	5.6	5.3	5.0	4.6	4.3	3.9	4.5	4.1	3.7
		INPUT	0.98	1.47	1.74	1.84	1.80	1.77	1.75	2.28	2.22	2.22	2.15	2.09	2.02	1.96	2.43	2.33	2.22
	80	TC	5.9	6.2	6.3	6.4	6.0	5.6	5.2	5.8	5.5	5.2	4.8	4.5	4.1	3.8	4.3	4.0	3.6
		INPUT	1.04	1.39	1.48	1.88	1.84	1.82	1.79	2.37	2.31	2.30	2.23	2.16	2.10	2.03	2.51	2.41	2.29
690	60	TC	6.2	7.6	8.5	8.1	7.7	7.3	6.9	7.2	6.6	6.2	5.7	5.2	4.7	4.4	4.9	4.5	4.1
		INPUT	0.77	1.25	1.69	1.65	1.62	1.61	1.60	2.05	1.99	1.98	1.91	1.85	1.80	1.74	2.17	2.09	2.00
	70	TC	6.1	7.4	8.0	7.5	7.1	6.7	6.3	6.3	5.9	5.6	5.2	4.8	4.5	4.1	4.7	4.3	3.9
		INPUT	0.89	1.41	1.80	1.76	1.73	1.71	1.70	2.15	2.10	2.10	2.05	1.99	1.94	1.88	2.33	2.24	2.14
	75	TC	6.0	7.3	7.6	7.2	6.7	6.3	5.9	6.1	5.7	5.4	5.1	4.7	4.3	4.0	4.6	4.2	3.8
		INPUT	0.96	1.47	1.86	1.82	1.78	1.76	1.74	2.24	2.19	2.19	2.13	2.07	2.01	1.95	2.41	2.32	2.21
	80	TC	5.9	6.8	7.0	6.8	6.3	5.9	5.4	6.0	5.6	5.3	4.9	4.6	4.2	3.9	4.4	4.1	3.6
		INPUT	1.02	1.47	1.68	1.87	1.83	1.81	1.79	2.33	2.27	2.27	2.21	2.15	2.08	2.02	2.49	2.40	2.28
960	60	TC	6.3	7.7	8.8	8.4	7.9	7.6	7.3	7.9	7.3	6.6	6.1	5.6	5.1	4.6	5.1	4.7	4.2
		INPUT	0.72	1.15	1.57	1.56	1.53	1.53	1.54	1.99	1.98	1.92	1.87	1.82	1.77	1.72	2.12	2.05	1.97
	70	TC	6.2	7.6	8.5	8.0	7.6	7.2	6.8	7.0	6.4	5.9	5.4	5.0	4.6	4.3	4.8	4.5	4.0
		INPUT	0.84	1.31	1.73	1.70	1.67	1.66	1.65	2.11	2.05	2.05	1.99	1.95	1.90	1.85	2.28	2.21	2.11
	75	TC	6.1	7.5	8.2	7.7	7.3	6.8	6.4	6.5	6.0	5.6	5.2	4.9	4.5	4.1	4.7	4.3	3.9
		INPUT	0.91	1.39	1.79	1.76	1.73	1.71	1.71	2.16	2.11	2.12	2.07	2.02	1.97	1.92	2.36	2.28	2.19
	80	TC	6.0	7.4	7.9	7.4	6.9	6.5	6.0	6.2	5.8	5.5	5.1	4.7	4.4	4.0	4.6	4.2	3.8
		INPUT	0.97	1.47	1.85	1.82	1.79	1.78	1.76	2.24	2.20	2.21	2.15	2.10	2.05	2.00	2.45	2.36	2.26
1050	60	TC	6.3	7.7	8.8	8.4	8.0	7.6	7.3	8.0	7.4	6.7	6.2	5.7	5.2	4.7	5.1	4.7	4.2
		INPUT	0.70	1.12	1.53	1.52	1.51	1.50	1.52	1.96	1.96	1.90	1.85	1.81	1.76	1.71	2.10	2.03	1.96
	70	TC	6.2	7.6	8.5	8.1	7.7	7.3	6.9	7.2	6.5	6.1	5.5	5.0	4.6	4.3	4.9	4.5	4.0
		INPUT	0.82	1.28	1.70	1.67	1.65	1.64	1.64	2.09	2.03	2.03	1.98	1.93	1.88	1.84	2.26	2.19	2.10
	75	TC	6.1	7.5	8.3	7.9	7.4	7.0	6.5	6.7	6.0	5.7	5.3	4.9	4.5	4.2	4.7	4.4	3.9
		INPUT	0.89	1.36	1.77	1.74	1.71	1.70	1.69	2.15	2.09	2.10	2.05	2.01	1.96	1.91	2.35	2.27	2.17
	80	TC	6.0	7.4	8.0	7.5	7.0	6.6	6.1	6.2	5.8	5.5	5.1	4.7	4.4	4.0	4.6	4.2	3.8
		INPUT	0.95	1.44	1.83	1.79	1.77	1.76	1.75	2.21	2.17	2.18	2.14	2.09	2.03	1.98	2.43	2.35	2.25

TZID36H520ZA+TZID36H520ZC for Heating

Indoor Airflow(SCFM)	Indoor fan power(W)	ID DB(℉)	ID RH	OD DB(℉)	86	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4
650	162	60	0.56	TC	8.2	8.9	8.6	9.6	9.1	8.5	7.9	8.0	7.5	7.1	6.7	6.2	5.8	5.3	5.6	5.2	4.7
				INPUT	1.19	1.85	1.82	2.65	2.62	2.52	2.46	2.82	2.75	2.66	2.58	2.49	2.40	2.32	2.70	2.59	2.46
		70		TC	8.0	8.3	7.9	8.5	7.9	7.8	7.3	7.6	7.2	6.8	6.3	5.9	5.5	5.1	5.4	4.9	4.4
				INPUT	1.35	1.97	1.93	2.10	2.00	2.67	2.61	3.02	2.95	2.87	2.77	2.67	2.58	2.48	2.88	2.76	2.62
		75		TC	7.4	7.4	7.5	8.2	7.6	7.6	7.1	7.4	7.0	6.6	6.2	5.7	5.3	4.9	5.2	4.8	4.3
				INPUT	1.37	1.53	1.72	2.16	2.05	2.76	2.71	3.12	3.05	2.96	2.86	2.76	2.66	2.57	2.98	2.85	2.70
		80		TC	6.5	6.5	6.6	6.7	6.4	7.1	6.9	7.0	6.8	6.4	6.0	5.6	5.2	4.8	5.0	4.6	4.2
				INPUT	1.20	1.41	1.51	1.78	1.77	2.69	2.80	3.12	3.15	3.06	2.96	2.85	2.75	2.65	3.07	2.94	2.79
850	215	60	0.56	TC	8.3	9.3	9.0	10.7	10.1	9.4	8.7	8.4	7.9	7.3	6.9	6.4	6.0	5.5	5.8	5.4	4.9
				INPUT	1.11	1.78	1.76	2.59	2.57	2.48	2.43	2.71	2.66	2.57	2.51	2.43	2.36	2.29	2.65	2.55	2.44
		70		TC	8.1	8.9	8.5	9.6	9.0	8.3	7.7	8.0	7.5	7.0	6.6	6.1	5.7	5.2	5.5	5.1	4.6
				INPUT	1.27	1.92	1.89	2.71	2.68	2.59	2.54	2.92	2.86	2.79	2.70	2.62	2.54	2.45	2.84	2.73	2.60
		75		TC	8.0	8.5	8.1	9.0	8.4	7.9	7.4	7.7	7.3	6.9	6.4	6.0	5.5	5.1	5.4	5.0	4.5
				INPUT	1.36	1.99	1.95	2.77	2.74	2.67	2.63	3.02	2.96	2.89	2.80	2.71	2.63	2.54	2.94	2.82	2.69
		80		TC	7.9	8.2	7.8	8.5	8.1	7.7	7.2	7.5	7.1	6.7	6.2	5.8	5.4	5.0	5.2	4.8	4.3
				INPUT	1.44	2.05	2.01	2.84	2.83	2.77	2.73	3.13	3.07	2.99	2.90	2.81	2.72	2.63	3.03	2.91	2.77
920	235	60	0.56	TC	8.4	9.4	9.0	10.9	10.4	9.6	9.0	8.5	7.9	7.3	7.0	6.5	6.0	5.6	5.9	5.4	4.9
				INPUT	1.10	1.77	1.73	2.57	2.55	2.47	2.42	2.68	2.64	2.55	2.48	2.42	2.35	2.28	2.65	2.55	2.44
		70		TC	8.2	9.0	8.7	9.9	9.3	8.6	7.9	8.1	7.6	7.1	6.6	6.2	5.7	5.3	5.6	5.2	4.6
				INPUT	1.26	1.91	1.89	2.70	2.68	2.59	2.54	2.89	2.84	2.77	2.69	2.61	2.53	2.45	2.83	2.73	2.61
		75		TC	8.1	8.7	8.3	9.3	8.7	8.0	7.5	7.8	7.4	6.9	6.5	6.0	5.6	5.2	5.5	5.0	4.5
				INPUT	1.34	1.98	1.94	2.76	2.74	2.65	2.61	3.00	2.95	2.87	2.79	2.71	2.62	2.54	2.93	2.82	2.69
		80		TC	8.0	8.3	7.9	8.7	8.2	7.8	7.3	7.6	7.1	6.7	6.3	5.8	5.4	5.0	5.3	4.9	4.4
				INPUT	1.43	2.05	2.01	2.82	2.81	2.75	2.71	3.11	3.05	2.98	2.89	2.80	2.71	2.63	3.03	2.91	2.78
1150	301	60	0.56	TC	8.5	9.6	9.2	11.7	11.0	10.2	9.6	9.1	8.3	7.6	7.1	6.7	6.2	5.7	6.0	5.6	5.0
				INPUT	1.08	1.73	1.71	2.55	2.53	2.45	2.41	2.68	2.62	2.53	2.47	2.42	2.36	2.29	2.65	2.56	2.46
		70		TC	8.3	9.3	9.0	10.7	10.0	9.2	8.5	8.3	7.8	7.3	6.8	6.4	5.9	5.4	5.8	5.3	4.8
				INPUT	1.24	1.90	1.88	2.69	2.67	2.59	2.54	2.86	2.82	2.74	2.68	2.61	2.54	2.47	2.84	2.74	2.63
		75		TC	8.2	9.1	8.7	10.1	9.4	8.6	7.9	8.1	7.6	7.1	6.7	6.2	5.7	5.3	5.6	5.2	4.7
				INPUT	1.33	1.97	1.95	2.76	2.74	2.66	2.61	2.97	2.92	2.86	2.78	2.71	2.63	2.55	2.94	2.83	2.71
		80		TC	8.1	8.8	8.3	9.4	8.8	8.0	7.5	7.9	7.4	7.0	6.5	6.0	5.6	5.2	5.5	5.0	4.5
				INPUT	1.41	2.04	2.01	2.82	2.80	2.72	2.69	3.08	3.03	2.96	2.88	2.80	2.72	2.64	3.03	2.93	2.80
1250	311	60	0.56	TC	8.5	9.6	9.2	11.9	11.2	10.4	9.8	9.3	8.5	7.6	7.1	6.7	6.2	5.8	6.1	5.6	5.1
				INPUT	1.07	1.71	1.70	2.54	2.52	2.44	2.41	2.67	2.62	2.52	2.46	2.41	2.35	2.29	2.64	2.56	2.46
		70		TC	8.3	9.3	9.0	10.9	10.2	9.4	8.7	8.4	7.9	7.3	6.9	6.4	5.9	5.5	5.8	5.3	4.8
				INPUT	1.23	1.88	1.87	2.68	2.66	2.59	2.54	2.84	2.80	2.73	2.67	2.60	2.54	2.47	2.84	2.74	2.63
		75		TC	8.2	9.2	8.8	10.3	9.6	8.8	8.1	8.2	7.7	7.2	6.7	6.2	5.8	5.3	5.7	5.2	4.7
				INPUT	1.32	1.97	1.94	2.75	2.73	2.65	2.61	2.95	2.91	2.85	2.77	2.70	2.63	2.56	2.93	2.83	2.72
		80		TC	8.2	8.9	8.5	9.7	9.0	8.2	7.6	7.9	7.4	7.0	6.5	6.1	5.6	5.2	5.5	5.1	4.6
				INPUT	1.40	2.04	2.01	2.82	2.80	2.72	2.68	3.06	3.02	2.95	2.88	2.80	2.72	2.64	3.03	2.93	2.80

TC-Total Capacity
INPUT: Total Sys. Kw

TZID48H520ZA+TZID60H520ZC for Heating

Indoor Airflow(SCFM)	Indoor fan power(W)	ID DB(°F)	ID RH	OD DB(°F)	86	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4
1050	254	60	0.56	TC	12.52	15.59	15.37	14.55	13.80	13.12	12.66	14.85	13.86	12.68	11.69	11.80	10.98	10.35	9.61	8.89	8.07
				INPUT	1.81	3.43	3.59	3.49	3.40	3.32	3.28	4.91	4.75	4.53	4.35	4.87	4.69	4.54	4.37	4.21	4.02
		70		TC	12.19	14.92	14.93	14.01	13.22	12.65	12.04	13.77	12.97	12.01	11.20	11.37	10.58	9.98	9.26	8.57	7.77
				INPUT	2.08	3.60	3.41	3.77	3.66	3.59	3.51	5.20	5.06	4.85	4.68	5.24	5.05	4.89	4.71	4.53	4.33
		75		TC	12.02	13.40	13.36	13.49	12.75	12.28	11.54	13.48	12.69	11.76	10.97	11.14	10.37	9.78	9.07	8.40	7.62
				INPUT	2.21	3.15	3.26	3.88	3.77	3.72	3.62	5.39	5.24	5.03	4.85	5.43	5.23	5.07	4.88	4.70	4.49
		80		TC	11.84	11.81	11.79	11.76	11.82	11.66	10.93	12.44	12.41	11.50	10.73	10.90	10.15	9.57	8.88	8.22	7.45
				INPUT	2.35	2.81	2.90	3.01	3.23	3.82	3.72	5.04	5.42	5.21	5.03	5.63	5.42	5.25	5.06	4.87	4.65
1250	322	60	0.56	TC	12.67	15.74	15.50	14.66	13.90	13.27	12.84	15.91	14.70	13.27	12.20	12.05	11.20	10.55	9.79	9.06	8.23
				INPUT	1.75	3.27	3.43	3.35	3.28	3.23	3.21	4.84	4.67	4.45	4.28	4.76	4.60	4.47	4.31	4.16	3.99
		70		TC	12.34	15.38	15.15	14.25	13.52	12.95	12.34	14.40	13.35	12.29	11.45	11.62	10.80	10.18	9.45	8.74	7.93
				INPUT	2.01	3.61	3.77	3.66	3.59	3.53	3.46	5.09	4.94	4.74	4.59	5.14	4.96	4.82	4.65	4.49	4.30
		75		TC	12.17	15.19	14.87	14.03	13.24	12.67	12.04	13.84	13.02	12.04	11.22	11.39	10.60	9.99	9.26	8.57	7.77
				INPUT	2.14	3.78	3.92	3.82	3.72	3.66	3.58	5.25	5.11	4.92	4.76	5.33	5.14	5.00	4.83	4.66	4.46
		80		TC	11.99	13.57	13.53	13.55	12.78	12.30	11.53	13.54	12.73	11.79	10.99	11.16	10.38	9.78	9.07	8.39	7.61
				INPUT	2.28	3.28	3.39	3.93	3.84	3.79	3.69	5.44	5.30	5.11	4.94	5.53	5.33	5.18	5.00	4.83	4.62
1500	431	60	0.56	TC	12.85	15.91	15.65	14.80	14.03	13.38	12.98	16.72	15.50	14.01	12.75	12.31	11.44	10.78	10.00	9.26	8.41
				INPUT	1.74	3.19	3.35	3.29	3.23	3.19	3.18	4.81	4.66	4.45	4.27	4.72	4.57	4.45	4.31	4.17	4.02
		70		TC	12.52	15.55	15.31	14.48	13.72	13.11	12.52	15.19	14.06	12.78	11.72	11.89	11.05	10.41	9.66	8.94	8.12
				INPUT	2.00	3.52	3.69	3.62	3.55	3.50	3.44	5.05	4.91	4.72	4.56	5.09	4.93	4.80	4.65	4.50	4.33
		75		TC	12.34	15.37	15.13	14.26	13.50	12.94	12.37	14.49	13.39	12.34	11.50	11.67	10.85	10.22	9.48	8.77	7.96
				INPUT	2.13	3.69	3.86	3.77	3.70	3.65	3.59	5.20	5.06	4.88	4.74	5.29	5.12	4.98	4.83	4.67	4.49
		80		TC	12.17	15.17	14.86	14.03	13.24	12.69	12.02	13.91	13.07	12.09	11.26	11.43	10.63	10.02	9.29	8.59	7.79
				INPUT	2.27	3.87	4.02	3.93	3.84	3.78	3.71	5.36	5.24	5.07	4.92	5.48	5.31	5.17	5.00	4.84	4.65
1600	486	60	0.56	TC	12.93	15.98	15.72	14.86	14.09	13.44	13.05	16.93	15.71	14.24	12.96	12.42	11.54	10.87	10.09	9.35	8.49
				INPUT	1.75	3.19	3.35	3.29	3.24	3.20	3.19	4.82	4.67	4.46	4.29	4.73	4.58	4.46	4.33	4.20	4.05
		70		TC	12.59	15.62	15.37	14.54	13.78	13.18	12.59	15.56	14.29	12.99	11.90	12.00	11.15	10.51	9.75	9.03	8.20
				INPUT	2.02	3.52	3.68	3.62	3.56	3.51	3.46	5.07	4.92	4.73	4.58	5.10	4.94	4.82	4.67	4.53	4.36
		75		TC	12.42	15.44	15.20	14.37	13.57	13.01	12.46	14.77	13.66	12.46	11.60	11.78	10.95	10.31	9.57	8.86	8.04
				INPUT	2.15	3.69	3.86	3.79	3.70	3.66	3.61	5.21	5.07	4.89	4.75	5.29	5.13	5.00	4.85	4.69	4.52
		80		TC	12.24	15.25	14.93	14.13	13.37	12.80	12.16	14.04	13.20	12.20	11.37	11.54	10.73	10.11	9.38	8.68	7.87
				INPUT	2.29	3.86	4.01	3.94	3.86	3.80	3.74	5.36	5.24	5.07	4.93	5.49	5.32	5.19	5.02	4.87	4.68
1750	576	60	0.56	TC	13.05	16.10	15.83	14.97	14.19	13.54	13.16	17.18	15.97	14.51	13.26	12.58	11.70	11.02	10.23	9.48	8.62
				INPUT	1.81	3.21	3.37	3.32	3.27	3.24	3.23	4.86	4.71	4.51	4.35	4.76	4.62	4.51	4.39	4.26	4.11
		70		TC	12.72	15.74	15.49	14.65	13.88	13.28	12.74	16.03	14.71	13.28	12.18	12.17	11.31	10.66	9.89	9.16	8.33
				INPUT	2.07	3.54	3.71	3.65	3.59	3.55	3.52	5.12	4.97	4.78	4.63	5.14	4.99	4.87	4.73	4.59	4.42
		75		TC	12.55	15.56	15.31	14.48	13.72	13.11	12.56	15.14	14.01	12.67	11.77	11.94	11.10	10.47	9.71	8.99	8.17
				INPUT	2.20	3.71	3.88	3.82	3.76	3.70	3.66	5.24	5.11	4.93	4.79	5.33	5.17	5.05	4.90	4.76	4.58
		80		TC	12.37	15.37	15.13	14.24	13.52	12.95	12.35	14.40	13.39	12.38	11.54	11.71	10.89	10.26	9.53	8.82	8.01
				INPUT	2.34	3.89	4.06	3.97	3.91	3.86	3.80	5.40	5.27	5.11	4.97	5.53	5.36	5.23	5.08	4.93	4.75

TZID60H520ZA+TZID60H520CA for Heating

Indoor Airflow(SCFM)	Indoor fan power(W)	ID DB(°F)	ID RH	OD DB(°F)	86	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4
1050	254	60	0.56	TC	12.5	15.6	16.6	17.7	17.2	16.2	15.9	15.6	14.7	13.7	12.8	12.6	11.7	11.1	10.7	10.0	9.1
				INPUT	1.81	3.43	4.24	4.85	4.82	4.63	4.64	5.76	5.61	5.36	5.15	5.57	5.34	5.17	5.39	5.17	4.91
		70		TC	12.2	14.9	15.2	15.4	15.4	14.7	14.3	15.0	14.2	13.2	12.3	12.2	11.3	10.7	10.4	9.6	8.7
				INPUT	2.08	3.60	4.26	4.68	4.79	4.85	4.82	6.17	6.02	5.75	5.53	5.98	5.74	5.56	5.80	5.56	5.28
		75		TC	12.0	13.4	13.4	13.9	14.0	14.0	13.6	14.2	13.9	12.9	12.0	11.9	11.1	10.5	10.2	9.4	8.6
				INPUT	2.21	3.15	3.26	4.44	4.65	4.82	4.94	6.32	6.22	5.95	5.73	6.19	5.94	5.76	6.01	5.76	5.47
		80		TC	11.8	11.8	11.8	11.8	11.8	12.4	12.5	12.4	12.4	12.4	11.8	11.7	10.9	10.3	9.9	9.2	8.4
				INPUT	2.35	2.81	2.90	3.01	3.24	4.54	4.68	5.05	5.46	5.99	5.92	6.40	6.15	5.96	6.22	5.96	5.67
1250	322	60	0.56	TC	12.7	15.7	16.9	18.3	17.7	16.9	16.7	16.1	15.1	14.0	13.0	12.9	12.0	11.3	11.0	10.1	9.2
				INPUT	1.75	3.27	4.07	4.70	4.65	4.53	4.55	5.58	5.43	5.21	5.02	5.42	5.22	5.07	5.28	5.08	4.85
		70		TC	12.3	15.4	16.3	17.3	16.9	15.8	15.4	15.4	14.5	13.5	12.6	12.4	11.6	10.9	10.6	9.8	8.9
				INPUT	2.01	3.61	4.39	4.98	4.95	4.78	4.77	5.98	5.84	5.61	5.40	5.84	5.62	5.46	5.69	5.48	5.22
		75		TC	12.2	15.2	15.7	15.9	15.9	15.0	14.5	15.1	14.3	13.2	12.3	12.2	11.3	10.7	10.4	9.6	8.7
				INPUT	2.14	3.78	4.50	4.78	4.93	4.89	4.87	6.19	6.05	5.81	5.60	6.05	5.83	5.66	5.90	5.68	5.41
		80		TC	12.0	13.6	13.5	14.2	14.2	14.2	13.8	14.5	13.9	12.9	12.1	11.9	11.1	10.5	10.2	9.4	8.5
				INPUT	2.28	3.28	3.40	4.55	4.74	5.02	4.99	6.30	6.26	6.01	5.80	6.27	6.04	5.86	6.12	5.88	5.61
1500	431	60	0.56	TC	12.9	15.9	17.1	18.6	17.9	17.1	17.0	17.0	15.9	14.5	13.3	13.2	12.3	11.6	11.2	10.4	9.4
				INPUT	1.74	3.19	3.94	4.57	4.52	4.43	4.46	5.50	5.37	5.14	4.95	5.35	5.16	5.02	5.24	5.06	4.84
		70		TC	12.5	15.6	16.6	18.1	17.6	16.5	16.2	15.8	14.9	13.8	12.9	12.7	11.8	11.2	10.8	10.0	9.1
				INPUT	2.00	3.52	4.29	4.93	4.90	4.75	4.76	5.85	5.74	5.52	5.34	5.76	5.57	5.42	5.65	5.45	5.22
		75		TC	12.3	15.4	16.4	17.5	17.0	15.9	15.5	15.5	14.6	13.5	12.6	12.5	11.6	11.0	10.6	9.8	8.9
				INPUT	2.13	3.69	4.47	5.06	5.03	4.87	4.87	6.07	5.95	5.73	5.54	5.98	5.77	5.62	5.86	5.65	5.41
		80		TC	12.2	15.2	15.9	16.2	16.3	15.1	14.6	15.2	14.3	13.3	12.4	12.2	11.4	10.7	10.4	9.6	8.8
				INPUT	2.27	3.87	4.60	4.91	5.16	4.99	4.98	6.29	6.16	5.93	5.74	6.20	5.98	5.82	6.08	5.86	5.60
1600	486	60	0.56	TC	12.9	16.0	17.1	18.7	18.0	17.1	17.0	17.4	16.2	14.7	13.5	13.3	12.4	11.7	11.3	10.5	9.5
				INPUT	1.75	3.19	3.93	4.54	4.50	4.40	4.44	5.51	5.37	5.15	4.96	5.34	5.17	5.03	5.25	5.07	4.86
		70		TC	12.6	15.6	16.8	18.2	17.7	16.7	16.4	16.0	15.1	13.9	13.0	12.8	11.9	11.3	10.9	10.1	9.2
				INPUT	2.02	3.52	4.30	4.90	4.88	4.75	4.77	5.83	5.72	5.52	5.34	5.76	5.57	5.42	5.66	5.46	5.24
		75		TC	12.4	15.4	16.5	17.8	17.3	16.2	15.8	15.7	14.8	13.7	12.7	12.6	11.7	11.1	10.7	9.9	9.0
				INPUT	2.15	3.69	4.46	5.06	5.04	4.88	4.89	6.05	5.94	5.72	5.54	5.98	5.78	5.63	5.87	5.67	5.43
		80		TC	12.2	15.2	16.1	16.9	16.6	15.4	15.0	15.3	14.5	13.4	12.5	12.4	11.5	10.8	10.5	9.7	8.8
				INPUT	2.29	3.86	4.61	5.04	5.17	5.01	5.00	6.27	6.15	5.93	5.74	6.19	5.99	5.83	6.09	5.87	5.62
1750	576	60	0.56	TC	13.0	16.1	17.2	18.8	18.1	17.2	17.2	18.0	16.6	15.0	13.8	13.5	12.5	11.8	11.4	10.6	9.6
				INPUT	1.79	3.20	3.93	4.52	4.48	4.39	4.44	5.53	5.39	5.16	4.99	5.36	5.19	5.06	5.27	5.10	4.90
		70		TC	12.7	15.7	16.9	18.3	17.8	16.9	16.7	16.3	15.3	14.1	13.2	13.0	12.1	11.4	11.1	10.2	9.3
				INPUT	2.06	3.53	4.29	4.89	4.86	4.76	4.79	5.84	5.72	5.53	5.36	5.77	5.59	5.45	5.68	5.50	5.28
		75		TC	12.5	15.5	16.6	18.1	17.6	16.5	16.2	15.9	15.0	13.9	12.9	12.8	11.9	11.2	10.9	10.1	9.1
				INPUT	2.19	3.70	4.46	5.08	5.06	4.91	4.92	6.04	5.94	5.73	5.56	5.99	5.80	5.65	5.90	5.70	5.47
		80		TC	12.4	15.4	16.4	17.5	17.0	15.9	15.5	15.5	14.7	13.6	12.7	12.5	11.6	11.0	10.7	9.9	9.0
				INPUT	2.33	3.87	4.64	5.22	5.20	5.04	5.04	6.26	6.15	5.94	5.76	6.21	6.01	5.86	6.11	5.91	5.67

TC-Total Capacity
INPUT: Total Sys. Kw

Electrical Components Description

Temperature Sensor
T1: IDU Ambient Temperature
—capacity demand control (R485 mode)
— Defrost control (heating mode)

T2: Indoor Coil Temperature
— Anti-Cold Air Function (heating mode)
— Anti-Freezing Function

T3: Outdoor Coil Temperature
— High/Low temperature protection
—Outdoor fan control (cooling mode)
— Defrost control (heating mode)

T4: ODU Ambient Temperature
— Operating condition permission
— Defrosting condition (heating mode)
— Outdoor fan control (heating mode)

T5: Compressor Discharge Temperature
— High temperature / Low superheat protection
— Electronic Expansion Valve (EEV) control

Tfin: Inverter board heat sink temperature sensor.
—Protection against overheating of the inverter board.

T7: Control board Heat Pipe Temperature
— Control board Anti-Condensed

Pressure transducer: Evaporating pressure in cooling mode and condensing pressure in heating mode.
— Compressor frequency control
— Electronic Expansion Valve (EEV) control
— High pressure protection (heating mode)
— Low pressure protection (cooling mode)

Pressure equalizer Value (PEV)
— Used to balance the pressure in the system before compressor start up

Reversing value operation
— Reversing value energizes during heat mode and de-energizes in cool

Compressor Crankcase Heater Description
— Refrigerant migration during the OFF cycle can result in noisy start-ups, therefore a

Crankcase Heater (CCH) is used to minimize refrigerant migration thereby minimizing start-up noise and/or bearing “wash out”. All CCHs must be installed around the lower half of the compressor shell. Its purpose is to warm the compressor during the OFF cycle, driving refrigerant from compressor. After extended shutdown periods in cold weather, it is recommended to allow CCH to be energized for at least 12 hours prior to compressor operation by applying line voltage to heat pump with thermostat OFF.CCH operation energizes:
First time line voltage is applied and compressor discharge temperature T5<73.4℉
Compressor stops running for 3 hours (outdoor ambient temperature T4<50℉or T5<73.4℉
CCH operation de-energizes:
Compressor discharge temperature T5>82℉

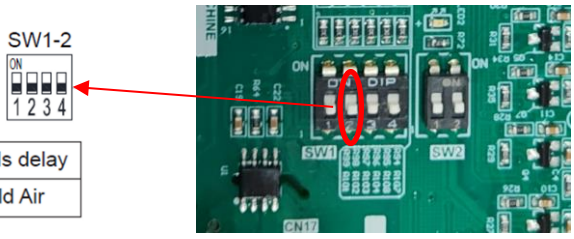
Control Logic Description

The variable speed system is applicable with the same 24V thermostat control as any conventional heat pump.
The compressor’s speed is controlled based on coil pressures monitored by the unit's pressure transducer and various temperature sensors. To ensure stable and adequate capacity, the compressor speed will modulate relative to evaporator pressure during cooling operation and relative to condensing pressure during heating operation.
After system startup and entered stable operation stage, the system software will continuously be monitoring the sensor input and adjust the compressor speed adaptively, so that it can provide enough stable output capacity.

Anti-Cold Air & Heating Fan Delay Function

Anti-Cold Air Function（Only effective in heating mode）
When SW1-2 is in the OFF position and running heating mode, the fan will not start when the coil temperature (T2) ＜82.4 ℉.
When T2 ≥ 82.4 ℉, the fan will start immediately, or when the electric heat kit is manually turned on, the fan will also start immediately

Heating Fan Delay Function
When the dip switch SW1-2 is set to “ON” and the indoor unit is in heating mode, the fan will operates with 90 seconds delay each time it starts. Fan speed determined by the Y1/Y2 signal from thermostat.



SW1-2	ON	90 seconds delay
	OFF	Anti-Cold Air

Indoor Coil Anti-Freezing Function

The function utilizes the indoor coil sensor(T2) to determine whether the indoor coil is freezing or not. The feature prevents the unit running at low evaporating temperature as well as low suction superheat.
When all the following conditions are met, the Anti-Freezing Function will activate，and the compressor will be turned off.
A. T2＜32℉ Duration exceeding 1 minute.
B. T2≤26.6℉ Duration exceeding 30 seconds.

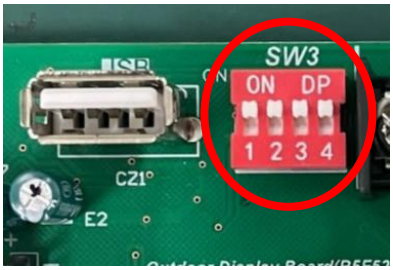
when T2≥42.8℉, the Anti-Freezing Function will deactivate:

R454B Leakage Detection Function

The function utilizes a R454B refrigerant sensor to detect the R454B concentration. Terminal F/L2 is reserved for connecting buzzer if needed.
When R454B leakage occur in the indoor coil and the concentration is above 10%LEF, the unit will perform as the following:
A. Cut off power to thermostat to stop compressor operation.
B. Electric Heat kit will be turned off.
C. High voltage will be output between terminal F and terminal L2.
D. The indoor fan is running at high wind speed, and at the same time, the fault light on the indoor mainboard is flash.

Accelerated operation mode

Through manually adjust the target outdoor coil temperature setting (SW3-3&4) to achieve improved cooling capacity and heating capacity demands.



	SW3-3	SW3-4
ON	Accelerated cooling	Accelerated heating
OFF	Normally cooling (factory default)	Normally heating (factory default)

Accelerated cooling/heating function changes the initial target coil temperature to provide "enhanced comfort" by increasing unit capacity.
In the Accelerated mode, the machine sets the target evaporation temperature to ±5 degrees Celsius. Provide a higher or lower target evaporation temperature or condensation temperature than normal mode, providing further cooling or heating effects. The compressor frequency is still be adjusted by variable frequency.

Defrost Description

According to the actual situation on site, the machine has multiple defrost modes to choose from:

Auto defrost:

the machine measures the ambient temperature and the temperature of the outdoor coil through sensors and calculates the condensation pressure and machine running time to determine whether to enter defrost mode. When the temperature of the coil exceeds the set value, the machine automatically exits defrosting mode.

Manual forced defrosting mode:

Press "▼" button on the display board for about 5 seconds to enter manual defrost. And LED display will show "dF" (shows the frequency of compressor in Hz)

1、manual defrosting could only be engaged after 5 min of operation after system power on for the 1st time. Also, the system should be operating in heating mode.

2. The system will exit manual defrosting by the same condition of normal defrosting cycles.

3. After the manual defrosting cycle finishes, the system will return the previous operation mode.

Fixed time defrosting:

You can choose to activate the defrost function every 30 minutes or 60 minutes. When the temperature of the coil exceeds the set value, the machine automatically exits defrosting mode.

Powerful defrosting：

Heating operating time is reduced by 10% and Defrosting extended for 60 seconds

Defrosting choice	SW2-1	SW2-2	SW2-3
ON	Fix timed defrost	Timer 30 min	Powerful defrosting
OFF	Auto Defrost (factory default)	Timer 60 min （factory default）	Normal （ factory default）
Remark	Defrosting ： control mode selection	Cycle time selection	Only applicable to fix timed defrosting timer and the Minimum Runtime Timer

If SW2-1 is ON, the fixed defrost time is determined by SW2-2 dial selection.

Forced operating mode:

Forced cooling mode: Press “K3” button on the display board for about 5 seconds to enter. And LED display will show “dC”.

Forced heating mode: Press “▲” button on the display board for about 5 seconds to enter. And LED display will show “dH”.

Capacity model selection

System software will recall performance setting parameters according to the DIP switch selection. The DIP should be set according to the matched IDU.

	SW3-1	SW3-2	Remark
2 Ton mode	OFF	OFF	
3 Ton mode	OFF	ON	Factory default
4 Ton mode	ON	OFF	
5 Ton mode	ON	ON	Factory default

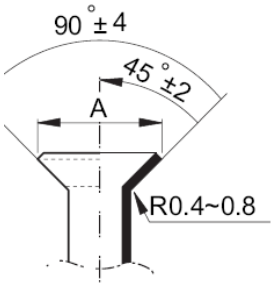
Precaution on Installation

1.1. Measure pipe length

Measure the necessary length of the connecting pipe and make it by the following way.
Connect the indoor unit at first, then the outdoor unit.
Bend the tubing in proper way.
Please refer to the table below for the length dimensions of the connection pipe

Refrigerant line		Capacity (Kbtu/h)			
		24K	36K	48K	60K
Liquid suction	In.	3/8 – 3/4	3/8 – 3/4	3/8 – 3/4	3/8 – 3/4
Max.Refrigerant Line Length*	Ft.	100			
Max.Elevation* Vertical Lift**	Ft.	50			

CAUTIONS:
Daub the surfaces of the flare pipe and the joint nuts with frozen oil, and wrench it for 3~4 rounds
With hands before fasten the flare nuts.
Be sure to use two wrenches simultaneously when you connect or disconnect the pipes.

Pipe Gauge	Tightening Torque	Flare Dimension A (Inches) Min	Max	Flare Shape
1/4"	11 - 11.8 ft.lbs	0.327	0.343	
3/8"	18 - 19.2 ft.lbs	0.472	0.488	
1/2"	25 - 26.6 ft.lbs	0.606	0.622	
5/8"	33 - 34.7 ft.lbs	0.732	0.752	
3/4"	47 - 49.4 ft. lbs	0.902	0.917	

The stop value of the outdoor unit should be closed absolutely (as original state). Every time you connect it, first loosen the nuts at the part of stop value, then connect the flare pipe immediately (in 5 minutes). If the nuts have been loosened for a long time, dusts and other impurities may enter the pipe system and may cause malfunction later. So please expel the air out of the pipe with refrigerant before connection.
Expel the air after connecting the refrigerant pipe with the indoor unit and the outdoor unit. Then fasten the nuts at the repair-points.

1.2. Locate The Pipe

Drill a hole in the wall (suitable just for the size of the wall conduit), then set on the fittings such as the wall conduit and its cover.
Bind the connecting pipe and the cables together tightly with binding tapes. Do not let air in,

which will cause water leakage by condensation.

Pass the bound connecting pipe through the wall conduit from outside. Be careful of the pipe allocation to do no damage to the tubing.

1.3. Connect the pipes.

1.4. Then, open the stem of stop values of the outdoor unit to make the refrigerant pipe connecting the indoor unit with the outdoor unit in fluent flow.

1.5. Be sure of no leakage by checking it with leak detector or soap water.

1.6. Cover the joint of the connecting pipe to the indoor unit with the soundproof / insulating sheath (fittings), and bind it well with the tapes to prevent leakage.

Oil return bend installation

Note that the length of the connecting line from the outdoor unit to the indoor unit cannot exceed 100 feet.

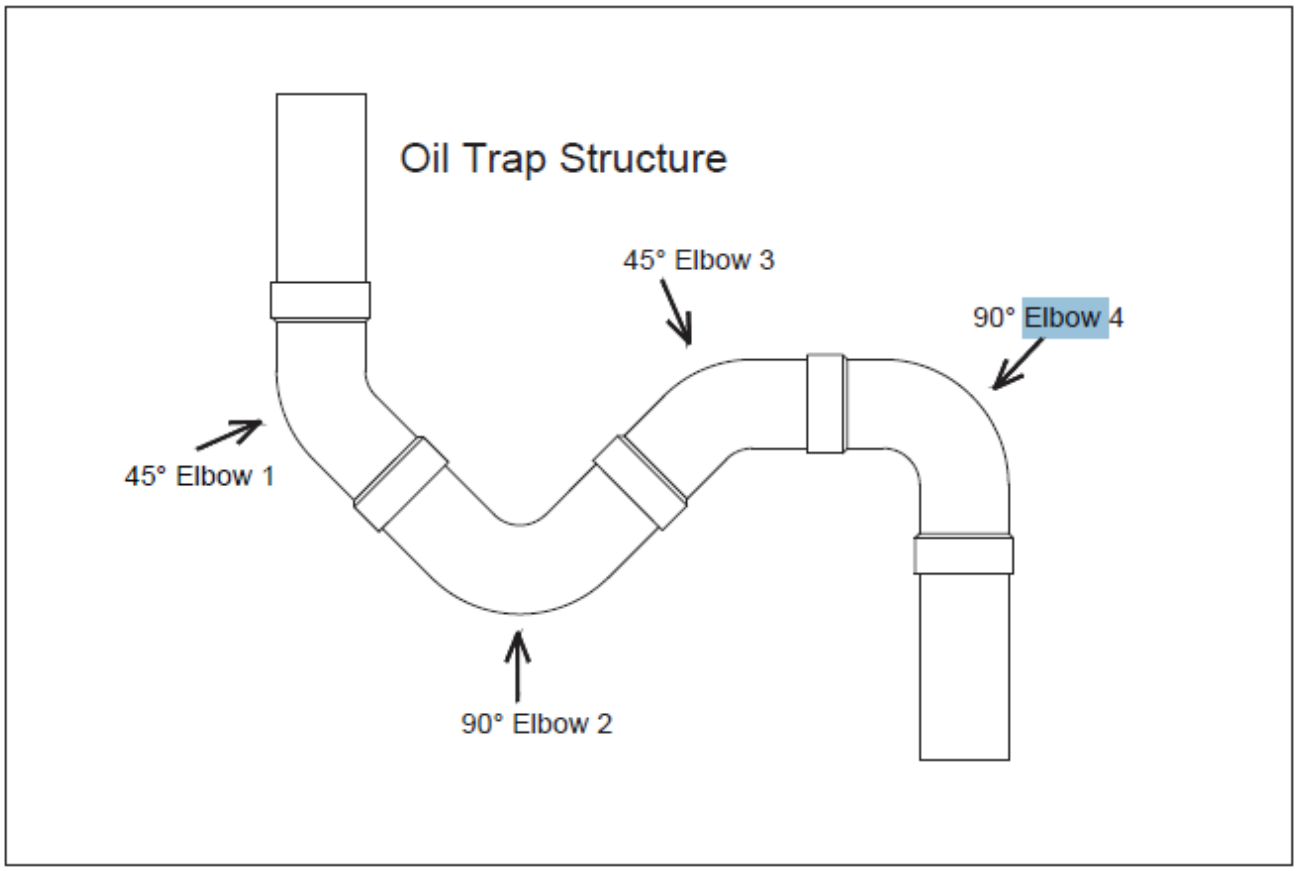
- If all long lines are in a horizontal state, no additional measures are required;
- If there is a vertical height difference in the long line, it needs to be installed according to the following

requirements:

- When the vertical height difference is 0＜h≤16.5feet, no additional measures are required;
- When the vertical height difference is 16.5feet＜h≤33feet, an oil return bend needs to be added in the middle of the height difference.
- When the vertical height difference is 33feet＜h≤50feet, two oil return bends need to be added at an equal distance in the height difference.

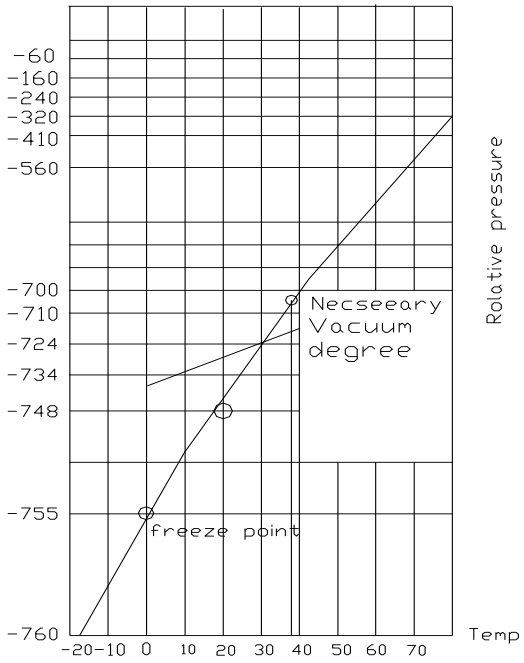
NOTE: The vertical height difference between the outdoor unit and the indoor unit cannot exceed 50 feet.

The following is the connection method of the oil return bend.



Vacuum Dry and Leakage Checking

3.1 Vacuum Dry: use vacuum pump to change the moisture (liquid) into steam (gas) in the pipe and discharge it out of the pipe to make the pipe dry. Under one atmospheric pressure, the boiling point of water(steam temperature) is 100℃. Use vacuum pump to make the pressure in the pipe near vacuum state, the boiling point of water falls relatively. When it falls under outdoor temperature, the moisture in the pipe will be vaporized.



3.2 Vacuum dry procedure

There are two methods of vacuum dry due to different construction environment: common vacuum dry, special vacuum dry.

①. Common vacuum dry procedure

Vacuum dry (for the first time) ---connect the all-purpose detector to the inlet of liquid pipe and gas pipe, and run the vacuum pump more than two hours (the vacuum pump should be below -755mmHg)

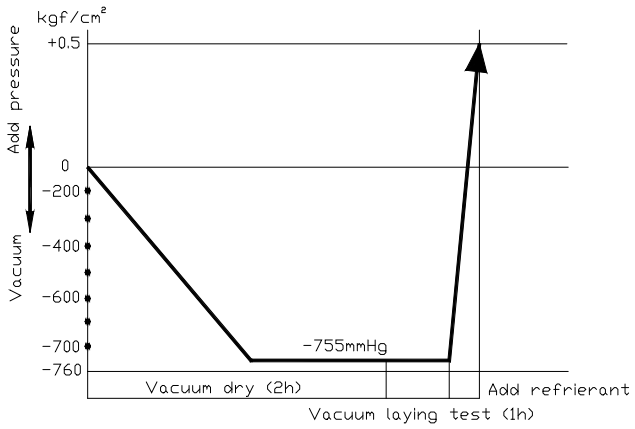
If the pump can't achieve below -755mmHg after pumping 2 hours, moisture or leakage point will still exist in the pipe. At this time, it should be pumped 1 hour more.

If the pump can't achieve -755mmHg after pumping 3 hours, please check if there are some leakage points.

Vacuum placement test: place 1 hour when it achieves -755mmHg, pass if the vacuum watch shows no rising. If it rises, it shows there's moisture or leakage point.

Vacuuming from liquid pipe and gas pipe at the same time.

Sketch map of common vacuum dry procedure.



② **Special vacuum dry procedure**

a. Vacuum dry for the first time 2h pumping

b. Fill nitrogen to 0.5Kgf/cm2 (7 PSI)

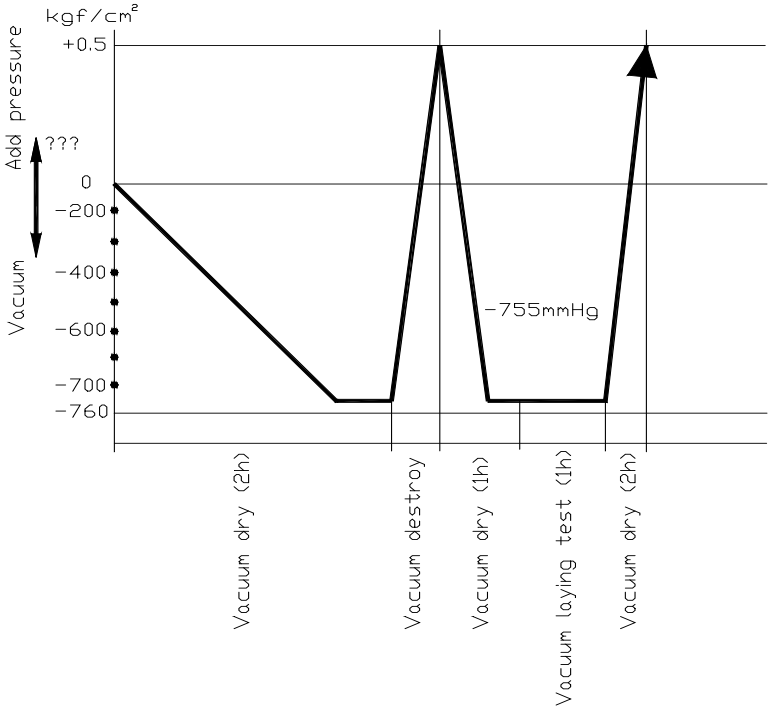
Because nitrogen is for drying gas, it has vacuum drying effect during vacuum destroy. But if the moisture is too much, this method can't dry thoroughly. So, please pay more attention to prevent water entering and forming condensation water.

c. Vacuum dry for the second time for 1h pumping

If -755mmHg can't be achieved in 2h, repeat procedure "b" and "c".

d. Vacuum placing test …… 1h

e. Sketch map of special vacuum dry procedure



Additional Refrigerant Charge

Caution

● Refrigerant cannot be charged until field wiring has been completed.

● Refrigerant may only be charged after performing the leak test and the vacuum pumping.

● When charging a system, care shall be taken that its maximum permissible charge is never exceeded, in view of the danger of liquid hammer.

● Charging with an unsuitable substance may cause explosions and accidents, so always ensure that the appropriate refrigerant is charged.

● Refrigerant containers shall be opened slowly.

● Always use protective gloves and protect your eyes when charging refrigerant.

Weigh-In Method

The factory charge in the outdoor unit is sufficient for 25 feet of standard size interconnecting liquid line. Additional 0.54 oz/ft refrigerant is needed when length of pipe is more than 25 feet.

Additional Refrigerant Guidelines

Piping length (ft)	Additional charge (oz)
25.0	0.00
50.0	13.5
75.0	27
100.0	40.5

Subcooling Method (10°F ± 2°F)

Check the ambient temperature. Subcooling method (cooling mode) is only for outdoor temperature between 68°F and 113°F, and indoor temperature between 68°F and 89°F. For temperature out of the range, use the weighing method mentioned above.

1. Start "forced cooling" mode.

Press the "Check" (K3) button for about 5 seconds to enter Force cooling mode. The LED display will show “dC”.

2. Wait until the system is basically stable.

Wait for twenty (20) minutes after "forced cooling" mode started. Compressor will maintain a specific frequency in "forced cooling" mode.

3. Calculate subcooling value.

Calculate subcooling value with measured liquid line temperature and pressure. If calculated subcooling value is lower than the design subcooling value of 10°F ± 2°F, refrigerant should be added. If calculated subcooling value is higher than the value shown in table "R-454B Refrigerant Physical Property") , refrigerant should be recovered.

4. Adjust refrigerant.

Connect service tools to unit and adjust refrigerant according to analysis in step 4.

5. Wait for stabilization of system.

Wait for 5 minutes, and repeat steps 4 through 5 until subcooling value matches the design subcooling value mentioned in step 4.·

6. Recover normal mode.

Remove service tools and short press "Check" (K3) " button to quit "forced cooling" mode. Symbol "dC" should disappear when "forced cooling" mode quitted.

Liquid Line Temp (°F)	Subcooling Value(°F)							
	6	7	8	9	10	11	12	13
	Liquid Gauge Pressure (PSI)							
55	164	167	170	172	175	178	181	184
60	178	181	184	187	191	194	197	200
65	194	197	200	203	206	210	213	217
70	210	213	217	220	223	227	230	234
75	227	230	234	238	241	245	249	252
80	245	249	252	256	260	264	268	272
85	264	268	272	276	280	284	288	292
90	284	288	292	297	301	305	309	314
95	305	309	314	318	323	327	332	336
100	327	332	336	341	346	351	355	360
105	351	355	360	365	370	375	380	385
110	375	380	385	390	396	401	406	412
115	401	406	412	417	422	428	433	439
120	428	433	439	445	450	456	462	468
125	456	462	468	474	480	486	492	498

Subcooling (°F)		Ambient Remperature (°F)				
		68~77	77~86	86~95	95~104	104~113
Model	24K	10±2	8±2	8±2	6±2	6±2
	36K	10±2	8±2	8±2	6±2	6±2
	48K	8±2	8±2	8±2	6±2	6±2
	60K	8±2	8±2	8±2	6±2	6±2

Insulation Work

5.1 Insulation material and thickness

5.1.1. Insulation material

Insulation material should adopt the material which is able to endure the pipe's temperature: no less than 158°F in the high-pressure side, no less than 248°F in the low-pressure side(For the cooling type machine, no requirements at the low-pressure side.)

Example: Heat pump type----Heat-resistant Polyethylene foam (withstand above 248° F)

Cooling only type----Polyethylene foam (withstand above 212°F

5.1.2. Thickness choice for insulation material

Insulation material thickness is as follows:

	Pipe diameter (in)	Adiabatic material thickness (in)
Refrigerant pipe	Φ2.5—Φ1.0	0.39 in.
	Φ1.13—Φ1.5	0.59 in
Drainage pipe	Inner diameterΦ0.78—Φ1.26	0.24 in

5.2 Refrigerant pipe insulation

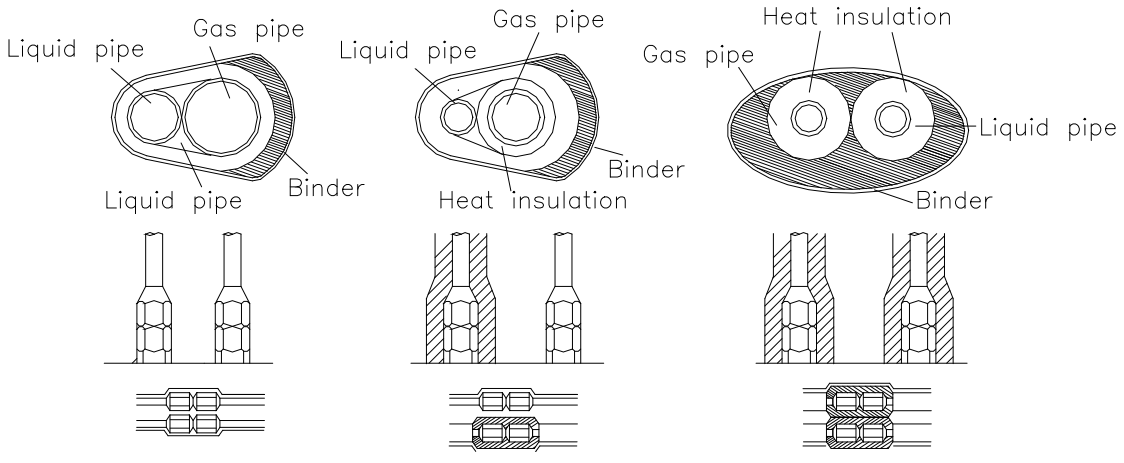
5.2.1. Work Procedure

① Before laying the pipes, the non-jointing parts and non-connection parts should be heat insulated.

② When the gas proof test is eligible, the jointing area, expanding area and the flange area should be heat insulated.

5.2.2. Insulation for non-jointing parts and non-connection parts

wrong	right	
Gas pipe and liquid pipe should not be put together to insulate	Insulate the gas pipe (cooling only)	Insulate the gas pipe and liquid pipe

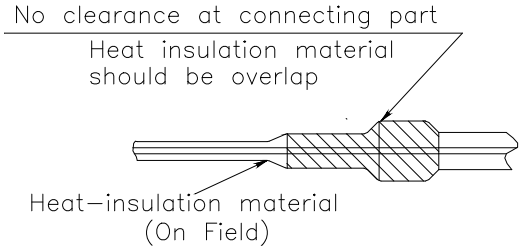


For construction convenience, before laying pipes, use insulation material to insulate the pipes to be deal with, at the same time, at two ends of the pipe, remain some length not to be insulated, in order to be welded and check the leakage after laying the pipes.

5.2.3. Insulate for the jointing area, expanding area and the flange area

① Insulate for the jointing area, expanding area and the flange area should be done after checking leakage of the pipes

② Make sure there's no clearance in the joining part of the accessorial insulation material and local preparative insulation material.



5.3 Drainage pipe insulation

The connection part should be insulated, or else water will be condensing at the non-insulation part.

5.4 Note

5.4.1 The jointing area, expanding area and the flange area should be heat insulated after passing the pressure test.

5.4.2 The gas and liquid pipe should be heat insulated individually, the connecting part should be heat insulated individually.

5.4.3 Use the attached heat-insulation material to insulate the pipe connections (pipes' tie-in, expand nut) of the indoor unit.

Test Operation

(1) The test operation must be carried out after the entire installation has been completed.
(2) Please confirm the following points before the test operation.
The indoor unit and outdoor unit are installed properly.
Tubing and wiring are correctly completed.
The refrigerant pipe system is leakage-checked.
The drainage is unimpeded.
The ground wiring is connected correctly.
The length of the tubing and the added stow capacity of the refrigerant have been recorded.
The power voltage fits the rated voltage of the air conditioner.
There is no obstacle at the outlet and inlet of the outdoor and indoor units.
The gas-side and liquid-side stop values are both opened.
The air conditioner is pre-heated by turning on the power.
(3) According to the user's requirement, install the 24v thermostat
(4) Test operation
Set the air conditioner under the mode of "COOLING" with the thermostat.
, and check the following points.
Indoor unit
Whether the fan motor operate normally.
Whether the room temperature is adjusted well.
Whether the indicator lights of indoor board normally.
Whether the drainage is normal.
Whether there is vibration or abnormal noise during operation.
Outdoor unit
Whether there is vibration or abnormal noise during operation.
Whether the generated wind, noise, or condensed of by the air conditioner have influenced your neighborhood.
Whether any of the refrigerant is leaked.