

DUCTED

FEATURES & BENEFITS



HCWA21NEHH
(Standard)



HCRA31NEWH
(Optional)



The efficient design makes the Ducted unit especially discreet. Ducted units can be installed in multiple points to thoroughly aerate each part of a space.

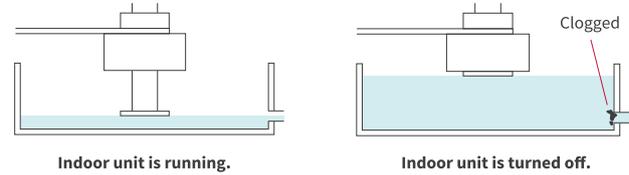


COMFORT

Durable Protection Drainage System

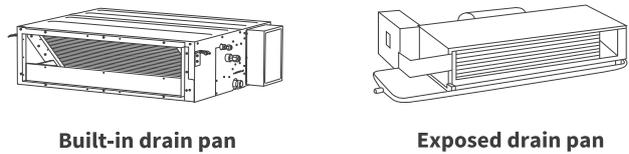
The special design of the drain pan makes condensation water flow smoothly without water leakage, and prevents rust.

When the drain pipe is clogged and the water rises to a certain level, the water level switch will float and send the signal to turn off the unit.



Built-in drain pan

Compared with outside drain pan design, the new built-in drain pan can reduce dust adhesion, and avoid water leakage.



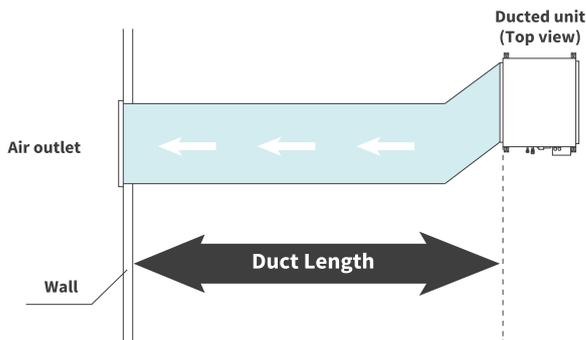
DESIGN FLEXIBILITY

Wide ESP range

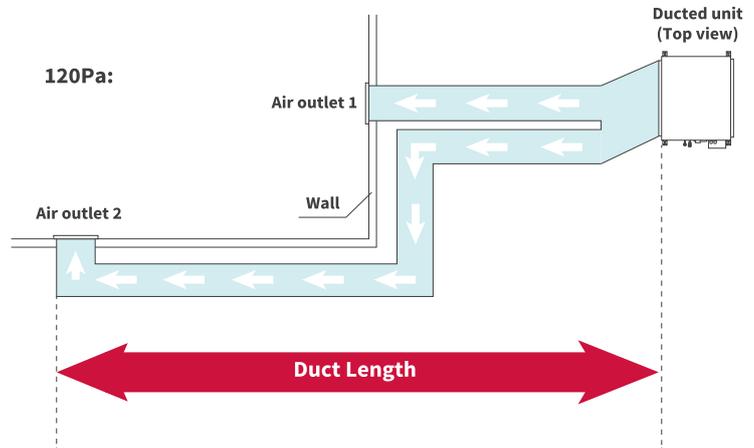
A wide ESP range means PRIMARY is suitable for spaces with many discrete areas, including corners and recesses. Multiple outlets can be connected to the ducted unit to ensure a uniform gust of air around a complex space. A system can be set up in a short time and will run reliably into the future.

For example:

60Pa:

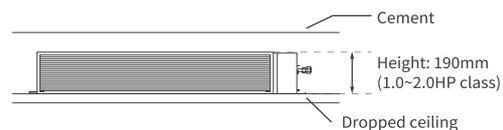


120Pa:



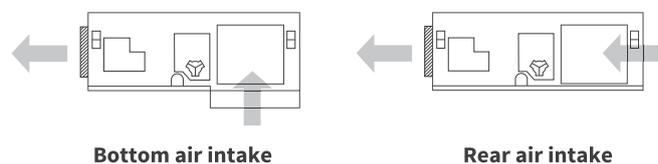
Compact design

This compact design minimizes the space between the cement and dropped ceiling, allowing a higher space within the room.



Flexible air return from bottom or rear

Depending on different space layout, the installation will be highly flexible.



SPECIFICATIONS



DUCTED (Inverter)

IDU		RPII-3.0UFE1NH	RPIH-3.0UFE1NH	RPIH-3.5UFE1NH	RPIH-4.0UFE1NH	RPIH-5.0UFE1NH	RPIH-5.0UFE1NH	RPIH-6.0UFE1NH	RPIH-6.0UFE1NH	RPIH-6.5UFE1NH	
ODU		RAS-3.0UFESNH1	RAS-3.0UFESNH1	RAS-3.5UFESNH1	RAS-4.0UFESNH1	RAS-5.0UFESMH1	RAS-5.0UFESNH1	RAS-6.0UFESMH1	RAS-6.0UFESNH1	RAS-6.5UFESMH1	
Power supply (Indoor)	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	
Power supply (Outdoor)	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50	
Max.input consumption	W	4,100	4,100	4,100	5,100	6,400	6,400	7,200	7,200	7,800	
Max.input current	A	18.1	18.1	18.0	22.5	11.6	28.2	12.6	30.0	13.1	
Average (Cooling)	Pdesignc	kW	6.90	7.30	8.50	10.10	12.10	12.50	14.19	14.10	17.10
	SEER	W/W	6.29	7.00	6.20	6.10	6.28	6.10	5.94	5.81	5.81
	ηs,c	100%	-	-	-	-	248%	241%	235%	235%	229%
	Energy Efficiency Class		A++	A++	A++	A++	-	-	-	-	-
	Annual energy consumption	kWh/a	395	365	499	577	761	698	849	829	943
Average (Heating)	Pdesignh	kW	6.00	6.00	6.50	8.20	9.50	9.00	12.40	12.10	11.00
	SCOP	W/W	4.05	4.00	4.00	3.92	3.70	3.70	3.70	3.70	3.72
	ηs,c	100%	-	-	-	-	145%	145%	145%	145%	146%
	Energy Efficiency Class		A+	A+	A+	A	-	-	-	-	-
	Annual energy consumption	kWh/a	2,007	2,100	2,313	2,926	3,674	3,392	4,694	4,503	4,205
Cooling	Capacity (Rated)	kW	6.90	7.30	8.50	10.10	12.10	12.50	14.19	14.10	17.10
	Capacity (Range.Min-Max)	kW	2.45-7.85	2.40-10.00	4.00-9.50	3.50-11.00	3.30-13.20	3.30-13.20	3.20-16.00	3.20-16.00	3.30-18.50
	Input	kW	2.16	2.086	2.67	3.80	4.22	4.38	4.78	4.78	6.60
	Current	A	9.5	9.0	11.6	17.1	7.4	19.0	8.7	21.0	12.5
	EER	W/W	3.19	3.50	3.18	2.66	2.87	2.85	2.97	2.95	2.59
Heating	Capacity (Rated)	kW	8.30	8.00	9.00	10.50	13.40	12.80	16.13	16.50	18.00
	Capacity (Range.Min-Max)	kW	2.20-8.70	2.20-9.20	3.50-9.40	3.32-12.00	3.00-14.60	3.00-14.60	3.40-18.50	3.40-18.50	3.00-19.50
	Input	kW	2.22	2.075	2.40	3.50	4.07	3.82	4.65	4.85	6.10
	Current	A	10.3	9.0	10.5	16.0	7.3	16.6	8.4	21.0	11.6
	COP	W/W	3.74	3.86	3.75	3.00	3.29	3.35	3.47	3.40	2.95
Indoor unit	Dimension (W×H×D)	mm	1,180×190×447	1,140×268×720	1,140×268×720	1,140×268×720	1,300×350×800	1,300×350×800	1,300×350×800	1,300×350×800	1,300×350×800
	Weight (Net/Gross)	kg	24/27.5	36.0/42.0	37.5/44.5	37.5/44.5	51/60	51/60	51/60	51/60	51/60
	Air Volume (Hi/Med/Low)	m ³ /h	1,000/700/490	1,300/1,130/960	1,450/1,120/900	1,800/1,600/1,400	1,750/1,500/1,300	1,750/1,500/1,300	2,400/2,200/1,900	2,400/2,200/1,900	2,400/2,200/1,900
	Sound Level (SPL)(Hi/Med/Low)	dB(A)	38/34/31	38/34/30	41/38/33	42/40/38	43/40/37	43/40/37	47/45/42	47/45/42	48/45/43
	Sound Level (PWL)(Hi)	dB(A)	61	59	63	65	69	69	77	77	77
	External Static Pressure (Rated)	Pa	25	25	37	37	50	50	50	50	50
	External Static Pressure (Range)	Pa	0-40	0-120	0-120	0-120	0-120	0-120	0-120	0-120	0-120
	Controller (Type/Model)		Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH	Wired/HCWA21NEHH
	Drain pump		Included	Included	Included	Included	Included	Included	Included	Included	Included
	Air filter		Included	Included	Included	Included	Included	Included	Included	Included	Included
Compressor	Type	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	
Outdoor unit	Dimension (W×H×D)	mm	860×670×310	860×670×310	860×670×310	950×840×340	950×1,050×340	950×1,050×340	950×1,386×340	950×1,386×340	950×1,386×340
	Weight (Net/Gross)	kg	49/53	49/53	49/53	70/75	85/95	85/97	101.5/114.5	101.5/114.5	109/121
	Air Volume (Hi)	m ³ /h	3,150	3,150	3,150	3,800	5,800	5,800	6,300	6,300	6,300
	Sound Level (SPL)(Hi)	dB(A)	54	54	54	58	62	62	62	62	67
	Sound Level (PWL)(Hi)	dB(A)	69	69	70	70	76	76	76	76	80
Refrigerant piping	Refrigerant (Type/Amount)	kg	R32/1.40	R32/1.40	R32/1.45	R32/2.00	R32/2.50	R32/2.50	R32/3.00	R32/3.00	R32/3.40
	Liquid/Gas	mm(inch)	Φ9.52/Φ15.88 (3/8"/5/8")	Φ9.52/Φ15.88(3/8"/5/8")	Φ9.52/Φ15.88 (3/8"/5/8")	Φ9.52/Φ19.05 (3/8"/3/4")					
	Max.pipe length	m	50	50	50	50	50	50	50	50	
	Max.height difference (OD lower)	m	30	30	30	30	30	30	30	30	
	Max.height difference (OD higher)	m	30	30	30	30	30	30	30	30	
	Add Refrigerant Amount	g/m	28	28	28	28	28	28	28	28	
	Pipe Length for Additional Refrigerant	m	5	5	5	5	5	5	5	5	
Ambient temperature	Cooling	°C	-15~+48	-15~+48	-15~+48	-15~+48	-15~+48	-15~+48	-15~+48	-15~+48	-15~+48
	Heating	°C	-15~+24	-15~+24	-15~+24	-15~+24	-15~+24	-15~+24	-15~+24	-15~+24	-15~+24

Nominal testing conditions:
 Cooling - Indoor (27°C DB / 19°C WB) & Outdoor (35°C DB / 24°C WB)
 Heating - Indoor (20°C DB / 15°C WB) & Outdoor (7°C DB / 6°C WB)

SPECIFICATIONS



DUCTED (HEAT & COOL)

IDU		RPIL-1.0UNZ1NH	RPIL-1.5UNZ1NH	RPIL-2.0UNZ1NH	RPIM-3.0UNZ1NH	RPIM-4.0UNZ1NH	RPIH-6.0UNZ1NH	RPIH-6.5UNZ1NH
ODU		RAS-1.0UNZGNH1	RAS-1.5UNZGNH1	RAS-2.0UNZGNH1	RAS-3.0UNZGNH1	RAS-4.0UNZGMH1	RAS-6.0UNZGMH1	RAS-6.5UNZGMH1
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50
Max. input consumption	W	1,800	1,800	2,460	3,250	4,321	6,479	8,234
Max. input current	A	10.0	10.0	10.2	15.5	9.0	12.1	16.6
Cooling	Capacity	W	2,989	3,277	4,686	6,829	10,258	13,113
	Capacity	Btu/h	10,200	11,180	15,990	23,300	35,000	44,740
	Input	W	1,076	1,162	1,775	2,439	3,703	4,967
	Current	A	5.1	5.1	7.5	10.2	6.9	8.8
	EER	W/W	2.78	2.82	2.64	2.80	2.77	2.64
Heating	Capacity	W	3,077	3,546	5,393	7,708	11,049	13,921
	Capacity	Btu/h	10,500	12,100	18,400	26,300	37,700	47,500
	Input	W	1,058	1,049	1,757	2,343	3,139	4,323
	Current	A	4.8	4.8	7.3	9.6	6.6	8.6
	COP	W/W	2.91	3.38	3.07	3.29	3.52	3.22
Indoor fan motor	Qty	1	1	1	1	1	1	1
	Input	W	70	70	83	226	209	558
	Capacitor	µF	3.0	3.0	2.5	6.0	10.0	10.0
	Speed(Hi/Med/L0)	r/min	955/700/655	955/700/655	1,280/1,130/1,070	910/830/730	917/821/787	1,000/900/830
Indoor noise level (Sound pressure)(Hi/Med/L0)	dB(A)	34/29/28	34/31/29	38/36/35	42/40/38	40/38/37	46/44/42	46/44/42
Indoor air flow Rated(Hi/Med/L0)	m ³ /h	650/470/450	650/470/450	750/670/630	1,250/1,000/900	1,800/1,650/1,500	2,000/1,800/1,600	2,000/1,800/1,600
ESP	Rated	10	10	10	50	50	80	80
	Range	10/30	10/30	10/30	50/80	50/80	80/120	80/120
Indoor unit	Dimension (WxHxD)	mm	900×190×447	900×190×447	900×190×447	900×270×720	1,300×350×800	1,300×350×800
	Packing(WxHxD)	mm	1,070×236×580	1,070×236×580	1,070×236×580	1,170×340×870	1,550×410×940	1,550×410×940
	Net/Gross weight	kg	19/25	19/25	30/35	54/62	54/62	54/62
Drainage water pipe diameter	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Controller		Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller	Wired controller
Operation temperature	°C	16-30	16-30	16-30	16-30	16-30	16-30	16-30
Qty'per 20' /40' /40'HQ(Indoor unit)	Set	200/440/484	200/440/484	200/440/484	84/182/182	35/75/90	35/75/90	35/75/90
Compressor	Type	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY
	Rated current(RLA)	A	4.1	4.1	7.2	11.4	5.9	7.8
	Refrigerant oil	type/ml	VG74 /350	VG74 /350	ATMOS-RB68EP/600	ø68HES-H/570	ø68HES-H/2,600	ø68HES-H/1,600
Outdoor fan motor	Qty	1	1	1	1	1	2	2
	Input	W	25	25	41	118	160	74/74
	Speed	r/min	850	850	910	880/830/540	880/740/660	900/800/700
Outdoor noise level (sound pressure)	dB(A)	55	55	54	56	62	55	58
Throttle type		Throttle Valve	Throttle Valve	Throttle Valve	Throttle Valve	Capillary	Capillary	Capillary
Outdoor unit	Dimension(WxHxD)	mm	715×482×240	715×482×240	810×585×280	860×665×310	885×795×366	950×1,050×340
	Packing(WxHxD)	mm	830×530×315	830×530×315	940×640×420	990×730×450	1,050×890×500	1,110×1,200×460
	Net/Gross weight	kg	28/30	28/30	42/45	51/56	67/71	96/103
Refrigerant	Type	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Charged volume	kg	0.85	0.85	1.30	1.58	2.60	2.40
Refrigerant piping	Liquid side/ Gas side	mm(inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ6.35/Φ12.7(1/4"/1/2")	Φ6.35/Φ12.7(1/4"/1/2")	Φ9.52/Φ15.88(3/8"/5/8")	Φ9.52/Φ19.05(3/8"/3/4")	Φ9.52/Φ19.05(3/8"/3/4")
	Max. pipe length	m	15	15	20	30	30	50
	Max. difference in level	m	7.5	7.5	15	15	20	30
Ambient temperature	Cooling	°C	-15→+48	-15→+48	-15→+48	-15→+48	-15→+48	-15→+48
	Heating	°C	-10→+24	-10→+24	-10→+24	-10→+24	-10→+24	-10→+24
Qty'per 20' /40' /40'HQ(Outdoor unit)	Set	204/412/520	204/412/520	102/204/272	90/186/186	44/92/96	26/53/106	26/53/53

Nominal testing conditions:
 Cooling - Indoor 80.6°F DB / 66.2°F WB (27°C DB / 19°C WB) & Outdoor 95°F DB / 75.2°F WB (35°C DB / 24°C WB)
 Heating - Indoor 68°F DB / 59°F WB (20°C DB / 15°C WB) & Outdoor 44.6°F DB / 42.8°F WB (7°C DB / 6°C WB)

SPECIFICATIONS

HITACHI



DUCTED (COOL ONLY)

IDU ODU		RPIM-2.0VNU1NH RAS-2.0VNUH1NH	RPIM-3.0VNU1NH RAS-3.0VNUH1NH	RPIH-3.5VNU1NH RAS-3.5VNUH1NH	RPIH-4.0VNU1NH RAS-4.0VNUH1NH	RPIH-5.0VNU1NH RAS-5.0VNUH1NH	RPIH-6.0VNU1NH RAS-6.0VNUH1NH	RPIH-6.5VNU1NH RAS-6.5VNUH1NH	RPIH-7.0VNU1NH RAS-7.0VNUH1NH	
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	220-240/1/50	220-240/1/50	380-415/3/50	380-415/3/50	380-415/3/50	380-415/3/50	
Max. input consumption	W	2,200	3,050	3,100	4,000	5,700	6,300	6,600	6,600	
Max. input current	A	11.5	14.5	14.0	20.0	9.2	10.5	12.8	14.5	
Cooling (T1)	Capacity	Btu/h	18,000	23,600	28,310	34,090	42,640	47,000	51,500	
	Capacity	W	5,275	6,917	8,297	9,991	12,497	13,775	15,094	
	Input	W	1,503	2,005	2,299	2,844	3,559	3,923	4,300	
	Current	A	6.6	8.7	10.5	13.5	6.6	7.9	8.3	
	EER	W/W (Btu/h/W)	3.51 (11.98)	3.45 (11.77)	3.61 (12.31)	3.51 (11.99)	3.51 (11.98)	3.51 (11.98)	3.51 (11.98)	3.63 (12.39)
Cooling (T3)	Capacity	Btu/h	16,000	20,500	25,400	29,850	36,500	43,650	52,000	
	Capacity	W	4,689	6,008	7,444	8,749	10,698	12,793	15,240	
	Input	W	1,800	2,375	2,822	3,499	4,114	4,921	5,708	
	EER	W/W (Btu/h/W)	2.61 (8.89)	2.53 (8.63)	2.64 (9.00)	2.50 (8.53)	2.60 (8.87)	2.60 (8.87)	2.60 (8.87)	2.67 (9.11)
	Qty		1	1	1	1	1	1	1	
Indoor fan motor	Output	W	95	95	250	250	250	250	560	
	Speed(Hi/Med/Lo)	r/min	1,000/920/820	1,180/1,020/960	850/800/720	970/900/800	1,050/900/830	1,140/1,000/900	1,140/1,000/900	920/840/780
	Indoor air flow Rated(Hi/Med/Lo)	m ³ /h	1,000/900/800	1,650/1,500/1,300	2,100/1,900/1,700	2,200/2,000/1,800	2,300/2,020/1,810	2,450/2,200/2,010	2,450/2,200/2,010	3,200/2,800/2,300
ESP	Rated	Pa	35	35	47	47	50	50	50	
	Range	Pa	0-80	0-80	0-120	0-120	0-120	0-120	0-150	
Indoor noise level (Sound pressure)(Hi/Med/Lo)	dB(A)	40/39/37	40/39/37	38/37/35	42/40/38	44/41/39	48/46/44	48/44/42	50/48/47	
Indoor unit	Dimension (WxHxD)	mm	900×270×720	900×270×720	1,300×350×800	1,300×350×800	1,300×350×800	1,300×350×800	1,400×420×858	
	Packing(WxHxD)	mm	1,170×340×870	1,170×340×870	1,550×410×940	1,550×410×940	1,550×410×940	1,550×410×940	1,650×505×1,010	
	Net/Gross weight	kg	30/35	30/35	50/55	51/60	51/60	51/60	83/99	
Drainage water pipe diameter	mm	ODΦ32								
Controller		Wired controller								
Operation temperature range	°C	20-28(UAE),16-30(others)								
Qty'per 20' /40' /40'HQ (Indoor unit)	Set	84/182/182	84/182/182	35/75/90	35/75/90	35/75/90	35/75/90	35/75/90	24/56/70	
Compressor	Type		ROTARY	ROTARY	ROTARY	TWIN ROTARY	TWIN ROTARY	Scroll	Scroll	
	Rated current(RLA)	A	6.6	9.2	10.9	13.3	6.7	7.9	8.0	
	Refrigerant oil	type/ml	RB75EA/700	α68HES-H/570	HAF68D1/570	α68HES-H/880	α68HES-H/1,600	3MAF POE/1,242	3MAF POE/1,656	POE(RB68A)/1,360
Outdoor fan motor	Qty		1	1	1	2	2	2	2	
	Output	W	70	103	95	138	65/65	121/121	121/121	
	Capacitor	μF	4	6	4	NA	4	NA	4/4	
	Speed	r/min	870	900	790	830	700/700	790/790	790/790	
Outdoor noise level (Sound pressure)	dB(A)	55	60	55	62	56	60	60	60	
Throttle type		Throttle Valve	Throttle Valve	Throttle Valve	Throttle Valve	Capillary	Capillary	Capillary	Capillary	
Outdoor unit	Dimension (WxHxD)	mm	860×650×310	885×795×366	950×840×340	950×1,050×340	950×1,386×340	950×1,386×340	950×1,386×340	
	Packing (WxHxD)	mm	990×730×450	1,050×890×500	1,110×910×460	1,110×1,200×460	1,110×1,530×460	1,110×1,530×460	1,110×1,530×460	
	Net/Gross weight	kg	48/54	59/62	60/65	83/86	98/112	106/120	118/132	
Refrigerant type/Quantity	Type/Charged volume	kg	R410A/1.50	R410A/2.00	R410A/2.20	R410A/2.80	R410A/3.40	R410A/4.20	R410A/4.90	
Refrigerant piping	Liquid side/Gas side	mm(inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ9.52/Φ15.88(3/8"/5/8")	Φ9.52/Φ19(3/8"/3/4")	Φ9.52/Φ19(3/8"/3/4")	Φ9.52/Φ19(3/8"/3/4")	Φ9.52/Φ19(3/8"/3/4")	Φ9.52/Φ22.22(3/8"/7/8")	
	Max. pipe length	m	30	30	30	50	50	50	50	
	Max. difference in level	m	15	15	20	20	30	30	30	
Ambient temperature	Cooling	°C	15-56	15-56	15-56	15-55	15-56	15-56	15-55	
Qty'per 20' /40' /40'HQ Outdoor unit)	Set	90/186/186	44/92/96	52/106/106	26/53/106	26/53/53	26/53/53	26/53/53	26/53/53	

Nominal testing conditions:
Cooling - Indoor 80.6°F DB / 66.2°F WB (27°C DB / 19°C WB) & Outdoor 95°F DB / 75.2°F WB (35°C DB / 24°C WB)
High ambient cooling test conditions:
Cooling - Indoor 84.2°F DB / 66.2°F WB (29°C DB / 19°C WB) & Outdoor 114.8°F DB / 75.2°F WB (46°C DB / 24°C WB)