



MARSHAL®

# ROOFTOP PACKAGE UNIT

AIR CONDITIONERS

Capacity 45-60TR

3RTH - 50Hz

R410A



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## **INTRODUCTION**

Rooftop package units have been developed & produced to provide not only the ultimate indoor comfort, but also to guarantee long & trouble free operations.

Here lies the reason for the choice of only the highest quality components and design strategists to meet the most important objective such as:

- EFFICIENCY
- RELIABILITY
- FLEXIBILITY
- EASY INSTALLABILITY
- SERVICEABILITY
- AFFORDABILITY

HIGH EER ROOFTOP PACKAGE UNITS - CAPACITY 540000 to 720000 BTU/HR

3RTH



## FEATURES

### Standard Features

- Refrigerant : R410A.
- Power Supply: 380-415V/3PH/50Hz.
- Factory Wired with Single Point Power Input.
- Scroll Compressor.
- High Pressure & Low Pressure Safety Switches.
- Power Controller, High/Low Voltage, Phase Loss/Reversal Protection.
- All units are provided with ON-Delay timers for Anti-short cycling.
- Internal Motor Protection for Indoor Motors.
- IP55 Class F Blower Motor
- Belt Drive Blower Motor Assembly.
- Thermostatic Expansion Valve
- Condenser Fans are Propeller type Direct Driven, draw through Vertical Discharge with fan guard mounted to the Panel.
- Condenser & Evaporator Coils are with Copper tubes and Aluminum fins.
- Weather resistant steel cabinet, qualified for 1000 Hours of Salt Spray test.
- 2" Disposable Air Filter

### Optional Features

- Electric Heater.
- Overload External protection for Blower Motor.
- Anti Ice thermostat.
- Hydrophilic Fin for Evaporator Coil.
- Copper Fins for Evaporator & Condenser coil.
- Heresite Coated Condenser Coil.
- Stainless Steel Drain Pan.
- Filter Differential pressure Switch.
- Overload External Protection for Compressor.
- Compressor Alternating Switch.
- Hour Run Meter.
- Fan Cycling Switch.
- Rotolock Compressor
- Circuit breaker (MCB) for Compressor & Blower Motor.
- Pump Down System.
- Dual Adjustable Pressure Switch.
- Hot Gas Bypass (with Solenoid).
- Pressure Gauges.
- Oversized Blower Motor & Alternate Drive Package.
- PCB Controller.
- Advanced Microprocessor Controller.
- Adjustable Voltage Monitor.
- UV Light.
- Adjustable Pressure Switch.
- VFD for Blower Motor.
- Soft Starter for Blower Motor.
- Volt free Contacts for Compressor & Blower ON/OFF/TRIP Status.
- Fire Alarm Interlock
- Crankcase Heater for Compressor
- Sight Glass
- 2" Synthetic Filter

# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## ENGINEERING SPECIFICATIONS

540K - 600K - 660K - 720K

TECHNICAL SPECIFICATIONS							
Description		Unit of measurement	3RTH540GC2	3RTH600GC2	3RTH660GC3	3RTH720GC3	
Nominal Cooling Capacity @ 35°C (T1)		Btu /Hr	539,209	616,558	669,814	746,654	
Power Consumption @ T1		Watts	52,980	60,360	65,340	72,830	
EER @ T1			10.18	10.21	10.25	10.25	
Cooling Capacity @ 46° (T3) *		Btu /Hr	486,723	553,915	604,476	674,310	
Power consumption @ 46° (T3) *		Watts	62,350	71,010	77,420	86,300	
EER @ 46° (T3)		Kwatts/tr.	7.81	7.80	7.81	7.81	
Power Factor @ 46° (T3)			0.81	0.81	0.80	0.80	
Air Flow (Evaporator)		CFM	16,000	18,000	19,250	21,000	
External static pressure		Inch H20 g	1.4"	1.6"	1.6"	1.6"	
Refrigerant Type			R410A				
Evaporator	Blower	Type	Centrifugal				
		Drive	Belt Drive				
		Dia x width	18" x 18" - Twin	18" x 18" - Twin	20" x 20" - Twin	20" x 20" - Twin	
		Qty	1	1	1	1	
	Blower Motor	Power Supply	V/Ph/Hz	380-415V/3Ph/50 Hz			
		HP		15.00	15.00	20.00	20.00
	Air filter Type		Synthetic Filter				
	Evaporator Coil	Tube Dia / no of row/ FPI		1/2" / 4 / 12	1/2" / 5 / 12	1/2" / 4 / 14	1/2" / 5 / 14
		Material Tubes - Fins		CU-AL			
	Expansion valve	Type		TEX VALVE			
Qty			2	2	3	3	
Condenser	Compressor	Power Supply	V/Ph/Hz	380-415V/3Ph/50 Hz			
		Type		SCROLL			
		Quantity		2	2	3	3
		Protection		Internal			
	Condenser Fan	Type		Propeller / Direct driven			
		Qty		4	4	6	6
		Dia of Fan	Inch	30"	30"	30"	30"
	Condenser Coil	Type of coil		Corrugated al fin with Inner grooved copper coil			
		Tube Dia / no of row/ FPI		3 Or 4 Row With 16FPI Or 14FPI Fin Sapcing			
	Condensar Fan Motor	Power Supply	V/Ph/Hz	380-415V/3Ph/50 Hz			
HP			1 1/2	1 1/2	1 1/2	1 1/2	
Qty		nos	4	4	6	6	
Dimensions	Length	mm	3350	3350	5862	5862	
	Width		2200	2200	2212	2212	
	Height		2404	2404	2415	2415	
Unit Weight	KG		3370	3420	4730	4730	
Note:	As a result of continous reaserch& development, the above specifications are subject to change without notice, need to contact our sales team time to time						
	*Cooling Capacity & Power Consumption / Ton are rated as per ESMA T3 condition						

# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## COOLING PERFORMANCE DATA

540K

LEGEND  
 TC: Total Cooling Capacity  
 SC: Sensible Cooling Capacity  
 P: Total Input Power  
 DBT: Dry Bulb Temperature  
 WBT: Wet Bulb Temperature

MODEL	EVAPORATOR OR CHW	DBT (°F)	WBT (°F)	AMBIENT AIR TEMPERATURE (°F)																						
				85.00			95.00			105.00			114.80			118.40			125.00							
				TC Btu/hr	SC Btu/hr	Pi kW	TC Btu/hr	SC Btu/hr	Pi kW	TC Btu/hr	SC Btu/hr	Pi kW	TC Btu/hr	SC Btu/hr	Pi kW	TC Btu/hr	SC Btu/hr	Pi kW	TC Btu/hr	SC Btu/hr	Pi kW					
3RTH540GC2																										
16000																										
82	78	84.2	66.2	585902	339980	48.25	559525	330103	53.63	532138	319777	59.75	514768	314676	63.32	504809	310669	65.72	483518	301805	71.25	465412	322125			
				563229	367816	47.60	538648	388612	52.98	511934	346398	59.06	494736	344209	62.00	468349	340317	65.02	465412	332125	69.55	447100	360848	70.55		
				552229	399805	47.31	525852	389591	52.61	492516	375112	58.45	476192	372254	62.00	449805	368591	64.70	447100	360848	69.85	427254	371317	70.55	409169	371317
				525005	445712	46.58	500822	435161	51.84	475231	423600	57.87	457991	419072	61.38	449063	414836	63.78	426461	403017	69.07	426461	403017	70.55	409169	371317
				584106	411358	48.17	557841	301481	53.55	530454	291155	59.67	513051	285601	63.24	503321	281594	65.68	482031	272962	71.13	482031	272962	70.55	465924	302340
				564688	340341	47.64	537189	329878	52.94	510475	319777	59.02	493248	315019	62.54	483861	311172	64.98	465924	302340	70.51	465924	302340	70.51	448424	331433
				523158	416978	46.34	499475	406427	51.80	474109	394978	57.83	456847	389882	61.34	447803	385532	63.74	428989	375525	69.12	428989	375525	70.55	410169	371317
				556270	412264	47.43	530230	456824	52.74	503853	446834	58.81	486723	447413	62.35	477451	440935	64.75	457517	432959	70.28	457517	432959	70.28	439259	371317
				596003	412264	48.49	568953	402050	53.92	541005	391499	60.04	522437	387749	63.55	512135	383014	65.99	490169	371317	71.52	490169	371317	70.55	473674	371317
				573555	443579	47.88	547290	433702	53.22	520016	423263	59.34	502405	420331	62.85	492675	416439	65.29	472286	408238	70.82	472286	408238	70.82	45638	438803
				555821	475007	47.39	527199	463446	52.55	505098	453344	58.69	483060	451238	62.23	473674	447460	64.63	45638	438803	70.82	45638	438803	70.82	441668	441668
				543923	510700	47.07	517771	499139	52.37	490721	490721	58.36	476993	476993	62.00	468866	468866	64.48	451628	451628	70.01	451628	451628	70.01	437816	437816
595891	381846	48.49	568841	371632	53.92	540780	361081	60.04	522233	356238	63.55	511906	351993	65.99	497401	376765	70.82	497401	376765	70.82	479341	314857				
573667	412937	47.88	547403	403060	53.27	520128	393621	59.34	502405	389081	62.89	492790	385189	65.29	474201	376765	70.82	474201	376765	70.82	457401	314857				
557617	445487	47.43	527199	432692	52.65	500710	427202	58.69	483174	420102	62.23	473674	416324	64.63	453741	408123	70.08	453741	408123	70.08	437816	437816				
533934	405966	46.82	509016	484884	52.08	483200	472874	58.12	466691	466691	61.65	458678	458678	64.09	441668	441668	69.62	441668	441668	69.62	426816	426816				
595218	352102	48.49	563167	342000	53.88	540219	331337	60.04	521536	326008	63.55	511334	321773	65.95	489592	312681	71.48	489592	312681	71.48	471829	346434				
573106	383193	47.88	546841	373136	53.22	510373	362958	59.34	492147	389892	62.85	492218	384594	65.29	471829	346434	70.14	471829	346434	70.14	452323	37792				
559188	416866	47.51	526301	402611	52.61	505076	392958	58.69	481517	389892	62.20	473216	385950	63.99	452323	37792	70.13	452323	37792	70.13	437816	437816				
533485	466140	46.78	508679	455028	52.08	482415	461252	58.12	461252	437722	61.50	451466	429031	63.86	437816	417344	69.39	437816	417344	69.39	423216	423216				
593422	321123	48.45	566371	311022	53.84	538423	300359	59.95	520348	294529	63.47	509846	290294	65.91	487881	281344	71.36	487881	281344	71.36	470341	314857				
571535	352214	47.84	546270	342337	53.18	517995	331899	59.26	500345	327153	62.81	490729	323147	65.21	470341	314857	70.74	470341	314857	70.74	451801	346808				
559749	386897	47.51	527445	372979	52.65	491939	361735	58.65	481344	363176	62.16	471956	354282	63.86	451801	346808	70.01	451801	346808	70.01	437816	437816				
532138	434936	46.78	507645	423937	52.04	481068	411927	58.04	461564	398364	61.50	451009	401358	63.86	437816	437816	69.07	437816	437816	69.07	42008	390418				
564239	489935	47.64	538199	480170	52.98	511261	469844	59.06	493706	467950	62.58	484434	464058	65.02	466516	454719	70.55	466516	454719	70.55	446516	454719				

# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## COOLING PERFORMANCE DATA

600K

MODEL	EVAPORATOR R CFM	DBT (°F)	WB1 (°F)	AMBIENT AIR TEMPERATURE (°F)																							
				85.00				95.00				105.00				114.80				118.40				125.00			
				TC Btu/hr	SC Btu/hr	PL	kW	TC Btu/hr	SC Btu/hr	PL	kW	TC Btu/hr	SC Btu/hr	PL	kW	TC Btu/hr	SC Btu/hr	PL	kW	TC Btu/hr	SC Btu/hr	PL	kW	TC Btu/hr	SC Btu/hr	PL	kW
3RTH600GC2																											
13000	82	80.6	66.2	625992	387629	53.95	599367	376098	59.91	571170	364044	66.81	549770	356134	70.92	539568	351670	73.71	517568	342318	80.04						
				603875	411737	53.46	578089	400102	59.41	550835	387943	66.27	531079	380259	70.37	520025	375795	73.15	498864	366336	79.48						
				582596	435217	52.96	557573	423477	58.92	533388	411318	65.77	511922	403832	69.90	501627	399388	72.68	480903	369824	78.97						
				561841	458488	52.51	537837	446853	58.47	512366	435588	65.32	492806	427446	69.43	483453	428272	72.17	463677	413204	78.46						
				625992	362786	53.91	599253	331885	59.91	571066	340564	66.81	549664	332877	73.71	517462	319575	80.04									
				603979	388991	53.46	578298	377556	59.41	551045	365197	66.31	530215	357203	70.37	502032	352859	73.15	489870	343274	79.48						
	80.6	66.2	582701	412576	52.96	557858	400941	58.92	535158	388677	65.77	511298	380886	69.90	501733	376433	72.68	481009	366668	78.97							
			515988	447377	52.33	528403	435637	58.24	503351	423713	65.10	484091	415968	69.10	474845	413398	71.95	455078	401277	78.24							
			626097	337524	53.95	599472	326728	59.91	571275	347671	66.81	549770	307655	70.92	539568	304200	73.71	515168	294877	80.04							
			604189	363939	53.46	578402	353038	59.41	551150	341612	66.31	530322	334028	70.37	502032	329777	73.15	490976	320318	79.48							
			582910	389830	53.01	558068	378195	58.96	531653	366035	65.82	515111	357940	69.90	501839	353477	72.68	481115	343912	78.97							
			552198	424735	52.33	528613	412995	58.24	503561	400731	66.77	484197	393012	69.21	475058	388442	71.95	455184	378771	78.24							
82	66.2	602420	312157	53.91	597795	301361	59.86	569598	290040	66.77	548176	281846	70.88	537973	277595	73.66	515974	268668	80.04								
		602617	338572	53.41	576936	327671	59.37	549682	316245	66.27	528940	308309	70.37	519056	304058	72.64	497695	295025	79.44								
		581548	364568	52.96	556705	335362	58.92	530395	342031	65.77	510235	333453	69.85	500564	330096	72.64	479840	320531	78.93								
		551045	401675	52.28	527460	389395	58.24	502408	377671	65.05	483135	366631	69.17	473889	365061	71.95	454121	353590	78.20								
		594860	446014	53.23	569493	434379	59.19	542639	422220	66.09	521138	415011	70.15	512361	410548	72.94	491318	400883	79.27								
		668340	444756	54.90	638256	432702	60.86	606705	420123	67.76	582397	415673	71.82	571132	408103	74.61	546794	398338	80.94								
80.6	66.2	645489	477251	54.36	616348	465991	60.31	585741	452513	67.22	562705	445300	71.27	551152	440730	74.01	527558	430953	80.34								
		623371	509116	53.86	595279	496957	59.82	565615	484169	66.68	542650	472789	70.24	531016	467613	73.49	508960	462729	79.78								
		601778	540982	53.41	574630	528613	59.32	545909	515825	66.18	524476	505355	70.24	515655	502477	72.02	496738	489617	79.40								
		641358	414358	54.90	638256	402304	60.36	606705	389830	67.76	582397	381959	71.82	571026	374795	74.61	546868	367824	80.94								
		645698	446643	54.36	616558	434388	60.36	585950	421905	67.22	562911	414267	71.27	551258	409697	74.05	527665	399920	80.34								
		478613	478613	53.86	629381	466654	59.82	565852	456666	66.68	542862	446363	70.71	532128	443600	74.01	527558	430953	80.34								
18000	82	80.6	66.2	591715	520697	53.19	564881	513728	59.10	535579	500835	65.91	515933	493975	69.98	504390	489086	72.72	485792	476227	79.10						
				668549	393645	54.90	638361	371696	60.90	606810	359117	67.80	582503	350820	71.82	571132	346356	74.61	546794	336685	80.94						
				645908	416035	54.36	616788	403876	60.36	586160	391297	67.22	562523	386234	71.27	551471	378654	74.05	527771	368887	80.34						
				623791	448110	53.86	595699	435846	59.82	565034	423058	66.68	542968	415330	70.71	532235	410760	73.49	509279	400876	79.78						
				591925	495490	53.19	565091	483225	59.10	536789	470228	65.91	514805	463048	69.98	504496	458266	72.72	482497	448276	79.01						
				666767	350627	54.86	636684	339411	60.86	605237	327671	67.76	580909	319575	71.78	569338	315111	74.56	545307	305440	80.90						
	76	80.6	66.2	644336	385113	54.36	615195	372954	60.31	584692	360375	67.17	561036	351883	71.22	549983	347313	74.01	526389	337353	80.30						
				622428	417083	53.86	594231	404819	59.82	565672	392136	66.63	541893	383978	70.67	530959	373902	73.45	508003	365918	79.74						
				590667	464463	53.14	563833	452094	59.10	537250	435201	65.91	513636	431484	69.94	503327	426802	72.72	481434	416712	78.97						
				636055	523866	54.13	607439	511422	60.13	577250	498739	66.99	553915	493218	71.01	543075	487598	73.79	519694	477714	80.11						
				677249	460794	55.08	646432	448635	61.08	614147	436056	67.98	589199	428827	71.99	577615	424257	74.78	552959	414566	81.11						
				654189	495804	54.54	624420	483540	60.54	593078	470857	67.40	568900	463898	71.44	557635	459222	74.22	533510	449465	80.51						
19500	82	80.6	66.2	631967	530081	54.04	603141	517816	60.00	572848	504923	66.86	549239	498256	70.88	528092	493550	73.66	514911	483666	79.96						
				610269	564357	53.59	582281	515883	59.50	554818	537523	66.41	536592	527452	70.54	525008	525008	73.28	506090	506090	79.70						
				677249	428194	55.08	646432	416035	61.08	614147	403457	67.98	589199	395775	71.99	577615	391205	74.78	552852	381534	80.11						
				654398	462890	54.59	624629	450626	60.54	593288	432943	67.40	569006	430528	71.44	557741	425851	74.22	533722	416074	80.51						
				632381	497272	54.09	603351	484903	60.00	573057	472114	66.86	549451	464961	70.88	538505	460285	73.66	515018	450011	79.96						
				599996	548319	53.37	572533	535846	59.28	543602	522848	66.09	524901	513105	70.24	513974	506941	73.06	494613	484613	79.06						
	80.6	66.2	677459	395176	55.08	646557	383016	61.08	614252	370438	67.98	589305	362298	71.99	577721	357728	74.22	552959	348673	81.11							
			654608	464463	54.09	624839	417712	60.04	593437	403201	66.86	569558	431697	70.88	548611	424694	73.66	515230	417030	79.96							
			632491	464463	54.09	605650	452094	60.04	573162	439201	66.86	549558	431697	70.88	548611	424694	73.66	515230	417030	79.96							
			600331	515510	53.37	572723	503937	59.28	543812	490939	66.09	521182	482922	70.15	510660	478246	72.89	488226	468043	79.19							
			675677	361633	55.04	648840	349893	61.04	612575	337314	67.94	587711	363361	71.40	566466	358791	74.18	532447	349013	80.47							
			653036	396643	54.54	623262	348484	60.50	591935	371801	66.86	548282	349740	70.88	537336	393118	73.62	513955	343244	79.91							
84.2	66.2	599053	482072	53.32	571590	448699	59.28	542659	456061	66.09	520013	449020	70.11	509598	444344	72.89	487067	434131	79.14								
		644755	545699	54.36	615405	533435	60.31	584483	520647	67.17	560610	514274	71.18	549451	505938	73.96	525645	498920	80.26								

LEGEND  
 TC: Total Cooling Capacity  
 SC: Sensible Cooling Capacity  
 PL: Total Input Power  
 DBT: Dry Bulb Temperature  
 WB1: Wet Bulb Temperature





# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## COOLING PERFORMANCE DATA

720K

MODEL	EVAPORATOR R CFM	DBT (°F)	WBFT (°F)	AMBIENT AIR TEMPERATURE (°F)																	
				85.00			95.00			105.00			114.80			118.40			125.00		
				TC SC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW	TC Btu/hr	PI kW		
3RTH720GC2	15000	82	69	757831	471800	65.04	724076	458387	72.26	688643	444416	80.40	666659	438730	86.09	653755	434377	89.33	626349	422000	96.55
			66.2	731900	504662	64.43	692622	491026	71.60	669497	476962	79.75	643364	471866	85.42	630917	466479	88.66	604195	455288	96.93
			65	706794	536630	63.81	675454	522881	70.99	642145	508574	78.48	621096	504048	84.79	608992	498681	88.02	582841	486911	96.30
			63	682607	586262	63.24	652033	554514	70.38	619790	552985	78.09	592985	537308	84.20	587409	527915	87.39	562058	515282	94.67
			69	757273	441174	65.04	723628	427649	72.22	689084	413678	80.40	666088	407327	86.09	653298	402128	88.33	625778	390977	96.60
			66.2	731676	473701	64.43	699038	460176	71.60	664923	445980	79.75	642949	440214	85.42	630688	434761	88.66	603967	428366	95.93
		80.6	65	708682	505892	63.81	672320	492255	70.99	641921	479255	78.48	620982	519578	84.79	608763	487278	88.02	582727	455659	95.30
			63	670871	553384	62.98	642804	539356	70.12	609848	525005	78.17	586865	519578	83.90	571018	513755	87.10	551895	501308	94.33
			69	757049	409877	65.04	723293	396464	72.22	687861	472320	80.40	660851	457467	86.09	629296	437024	89.33	605672	399377	96.60
			66.2	731564	442739	64.43	698926	429103	71.60	665800	415191	79.75	643021	410958	85.42	630640	403216	88.66	603789	392025	95.93
			65	706639	475042	63.81	675118	461405	70.99	641809	441098	79.09	620753	441222	84.79	608649	403216	86.02	582499	424456	95.30
			63	670759	522658	62.98	640692	508798	70.12	608836	496379	78.17	586665	489317	83.86	576903	483836	87.10	560558	472188	94.33
	82	69	754478	378469	64.95	720834	365056	72.17	685402	350972	80.31	663347	343379	86.01	640548	338126	88.24	623037	326953	96.52	
		66.2	729217	411442	64.34	696691	397806	71.52	662376	383610	79.66	640851	376495	85.37	628404	371242	88.61	610683	359937	95.85	
		65	704627	443745	63.77	672106	430108	70.95	639909	415801	79.05	618926	400514	84.74	605708	403787	87.98	580672	392367	95.22	
		63	668971	491361	62.94	639015	477613	70.07	607159	463082	78.13	586952	457343	83.82	573505	451862	87.06	550296	440214	94.29	
		66.2	721728	551272	64.16	689537	537636	71.34	656570	523440	79.48	634342	518322	85.16	622010	512613	88.40	595517	500622	96.88	
		69	810365	556302	66.31	772362	540989	73.49	732794	525229	81.63	707540	519807	87.27	693266	513983	90.51	663005	501993	97.78	
	80.6	65	783651	596876	65.65	746766	581451	72.83	708315	565467	80.97	683674	560460	86.59	669742	554636	89.79	640280	542417	97.07	
		63	757831	636668	65.04	722064	621019	72.17	684731	604812	80.31	660607	600541	85.92	647132	594603	89.16	618241	582156	96.39	
		69	732370	676348	64.43	697809	660388	71.56	661594	644269	79.66	638453	634953	85.29	627262	627262	88.57	603168	603168	96.93	
		66.2	709807	515281	66.31	771803	501309	73.49	732235	486877	81.63	706669	481438	87.23	692695	475728	90.46	662434	463738	97.74	
		65	783540	558673	65.65	746554	543448	72.83	708092	527464	80.97	683445	521748	86.55	669628	515924	89.79	640052	503951	97.07	
		63	757120	598664	65.04	721840	604141	71.25	684619	566921	80.31	660378	563830	85.92	647018	558922	89.12	618127	543445	96.39	
21000	69	806789	427649	66.22	771468	413678	73.40	729329	399147	81.54	704000	393253	87.14	689840	386886	90.38	659579	375467	97.66		
	66.2	783167	517293	65.65	746430	503097	72.83	702868	488455	80.97	683217	482922	86.55	669286	477099	89.79	639710	464880	97.07		
	65	757608	560773	65.04	721840	654124	72.17	684396	528917	80.27	662064	523004	85.92	646789	517180	89.12	617899	504619	96.35		
	63	720163	619902	64.16	686072	604141	71.25	659304	587711	79.35	626920	582727	84.95	613902	576675	88.19	586153	553885	95.38		
	69	806789	427649	66.22	771468	413678	73.40	729329	399147	81.54	704000	393253	87.14	689840	386886	90.38	659579	375467	97.66		
	66.2	780857	473477	65.61	743971	459382	72.79	705633	444639	80.88	680933	443837	86.51	667002	432906	89.71	637540	421372	96.98		
	82	65	755372	518634	65.00	719716	504327	72.13	682384	489461	80.23	658209	483836	85.88	644848	472898	89.08	615957	465451	96.31	
		63	718375	581228	64.12	684284	655467	71.21	648516	549037	79.31	625207	543216	84.91	612303	537164	88.11	584440	524755	95.34	
		69	773145	654552	65.39	736706	639127	72.57	698703	623031	80.71	674310	619155	86.30	660607	613331	89.54	631373	600998	96.77	
		66.2	719163	573627	65.53	780745	558144	73.21	740395	542442	81.85	714620	539253	87.48	700118	531569	90.72	669400	519464	97.95	
		65	792705	616884	65.87	755037	601347	73.05	719316	585252	81.19	690640	580672	86.76	676594	574848	90.00	646561	562515	97.28	
		63	762773	659246	65.26	730223	643486	72.39	692108	627167	80.49	667458	623380	86.13	653755	617328	89.33	624408	604881	96.56	
80.6	69	741289	701609	64.65	705856	685737	71.78	695930	668747	79.88	659000	659000	85.63	636669	636669	88.87	612189	612189	96.18		
	66.2	819084	533776	66.53	780186	518299	73.71	739836	502538	81.85	714049	494511	87.44	699547	490688	90.67	668829	478697	97.95		
	65	792593	576421	65.87	754925	560885	73.05	715692	544789	81.15	690411	539334	86.76	676565	535310	90.00	646331	511177	97.23		
	63	766662	618784	65.26	730111	603135	72.39	691996	586816	80.49	667344	582042	86.13	653641	576104	89.33	624293	563543	96.56		
	69	728994	681937	64.34	694120	666065	71.47	657570	649410	79.53	636969	636969	85.25	625435	576104	88.53	598143	598143	96.76		
	66.2	818749	486443	66.48	779851	472471	73.71	739500	457940	81.85	713392	452090	87.44	699204	446837	90.67	668372	435418	97.95		
76	65	792370	535288	65.87	754702	520422	73.05	715692	544789	81.15	690411	539334	86.76	676565	535310	90.00	646331	511177	97.23		
	69	728994	641474	64.34	694120	652990	71.47	657570	649410	79.53	636969	636969	85.25	625435	576104	88.53	598143	598143	96.76		
	66.2	815954	493986	66.44	777280	423302	73.62	736930	410771	81.76	711080	404015	87.35	696578	398848	90.59	665880	387229	97.87		
	65	789911	488343	65.83	752243	474148	72.96	713392	453933	81.10	687993	453464	86.68	673739	447979	89.92	643820	486244	97.12		
	63	764314	536630	65.21	727876	521764	72.35	689873	505445	80.45	665060	4949024	86.05	651471	449036	89.29	621224	480624	96.52		
	69	727093	600341	64.30	692332	584357	71.43	657381	567815	79.48	631944	562827	85.12	618698	556234	88.32	590492	543331	95.51		
84.2	782837	678360	65.61	744977	662711	72.79	706192	646504	80.88	681162	642349	86.51	667230	637311	89.75	637540	624864	96.98			

LEGEND  
 TC: Total Cooling Capacity  
 SC: Sensible Cooling Capacity  
 PI: Partial Input Power  
 DBT: Dry Bulb Temperature  
 WBFT: Wet Bulb Temperature

# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## ELECTRICAL DATA

### 380-415V-3PH-50HZ ("G" VOLTAGE) POWER SUPPLY

380/415V-3PH-50HZ ("G" VOLTAGE) POWER SUPPLY - R410A														
MODEL	V/PH/Hz	Operating Voltage		TYPY	Compressor			Condenser Motor			BLOWER MOTOR		MCA	MOCP
		MIN	MAX		RLA	LRA	QTY	HP	AMPS	QTY	HP	AMPS	AMPS	AMPS
3RTH540GC2	380-415/3/50	342	456	SCR	48.1	310.0	1	1/2	3.0	4	15	20.8	130	180
					36.8	287.5	1							
3RTH600GC2	380-415/3/50	342	456	SCR	48.1	310.0	2	1/2	3.0	4	15	20.8	142	190
3RTH660GC3	380-415/3/50	342	456	SCR	36.8	287.5	1	1/2	3.0	6	20	30.0	154	195
					29.2	219.0	2							
3RTH720GC3	380-415/3/50	342	456	SCR	36.8	287.5	3	1/2	3.0	6	20	30.0	168	205

### ELECTRIC HEATER MODE

MODEL	POWER SUPPLY			BLOWER MOTOR		Heater Capacity	MCA	MOCP
	V-Ph-Hz	MIN	MAX	HP	FLA			
3RTH540GE2	380-415-3-50	342	456	15	20.8	40	97	120
						50	116	135
						60	135	155
						70	155	175
3RTH600GE2	380-415-3-50	342	456	15	20.8	40	97	120
						50	116	135
						60	135	155
						70	155	175
3RTH660GE3	380-415-3-50	342	456	20	30.0	50	125	155
						60	144	175
						70	163	195
						80	182	215
3RTH720GE3	380-415-3-50	342	456	20	30.0	50	125	155
						60	144	175
						70	163	195
						80	182	215

**NOTE:**

SCR - Scroll Compressor, RLA - Running Load Amps, LRA - Locked Rotor Amps, FLA - Full Load Amps, MCA - Minimum Circuit Amps  
MOCP - Maximum Over Current Protection

# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## FAN PERFORMANCE DATA

540K - 720K

FAN PERFORMANCE - 3RTH540GC2																				
External Static Pressure																				
Air	0.4		0.6		0.7		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
Flow	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11500	629	3.73	671	4.25	711	4.51	763	4.79	789	5.37	817	5.80	845	6.10	887	6.53	921	7.09	957	7.70
12000	628	4.00	672	4.42	706	4.67	758	4.96	785	5.58	810	6.00	840	6.25	887	6.67	916	7.25	945	7.88
13000	624	4.56	668	5.06	703	5.40	751	5.66	777	6.17	800	6.50	830	6.67	879	7.18	914	7.77	950	8.41
14000	622	5.21	666	5.75	701	6.15	750	6.48	772	6.80	796	7.05	824	7.21	877	7.62	911	8.50	946	9.48
15000	620	5.89	665	6.53	700	7.01	748	7.34	770	7.53	795	7.70	823	7.81	875	8.25	910	9.24	946	10.36
<b>16000</b>	623	6.46	667	7.08	701	7.56	750	7.85	771	8.30	796	8.45	<b>824</b>	<b>8.60</b>	876	9.10	911	9.89	947	10.75
17000	625	7.09	670	7.77	704	8.29	753	8.61	774	9.11	799	9.27	827	9.43	879	9.98	914	10.85	951	11.79
17500	627	7.40	672	8.11	706	8.66	755	9.00	776	9.51	802	9.69	830	9.86	882	10.43	917	11.34	954	12.32

FAN PERFORMANCE - 3RTH600GC2																				
External Static Pressure																				
Air	0.4		0.6		0.7		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
Flow	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	624	4.56	668	5.06	703	5.40	751	5.66	777	6.17	800	6.50	830	6.67	879	7.18	914	7.77	950	8.41
14000	622	5.21	666	5.75	701	6.15	750	6.48	772	6.80	796	7.05	824	7.21	877	7.62	911	8.50	946	9.48
15000	620	5.89	665	6.53	700	7.01	748	7.34	770	7.53	795	7.70	823	7.81	875	8.25	910	9.24	946	10.36
16000	623	6.46	667	7.08	701	7.56	750	7.85	771	8.30	796	8.45	824	8.60	876	9.10	911	9.89	947	10.75
17000	625	7.09	670	7.77	704	8.29	753	8.61	774	9.11	799	9.27	827	9.43	879	9.98	914	10.85	951	11.79
<b>18000</b>	629	7.72	674	8.46	708	9.04	758	9.38	779	9.92	804	10.10	832	10.28	<b>885</b>	<b>10.88</b>	920	11.82	957	12.85
19000	633	8.49	678	9.30	712	9.93	762	10.31	784	10.90	809	11.10	837	11.30	890	11.95	926	12.99	963	14.12
19500	636	8.91	680	9.76	715	10.42	765	10.82	786	11.44	812	11.65	841	11.86	894	12.55	929	13.64	968	16.48

FAN PERFORMANCE - 3RTH660GC3																				
External Static Pressure																				
Air	0.4		0.6		0.7		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
Flow	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	544	4.74	566	0.47	585	0.37	604	1.21	633	5.23	660	6.81	687	7.04	721	8.88	756	7.60	776	8.42
15000	546	5.08	568	0.79	587	1.51	606	2.22	636	5.78	662	7.27	689	7.59	723	9.26	757	8.32	778	9.12
16000	547	5.42	570	2.06	590	2.64	609	3.23	638	6.33	664	7.74	690	8.15	724	9.64	758	9.04	781	9.82
17000	548	5.76	573	3.32	592	3.78	611	4.24	640	6.88	666	8.21	691	8.70	725	10.03	759	9.76	784	10.52
18000	550	6.10	575	4.58	594	4.92	613	5.25	642	7.43	667	8.67	693	9.25	727	10.41	761	10.48	786	11.23
19000	551	6.57	577	5.98	597	6.19	616	6.40	645	8.14	669	9.32	694	10.00	728	11.01	762	11.43	789	12.02
<b>19250</b>	551	6.58	578	6.22	597	6.40	616	6.58	645	8.19	670	9.34	694	10.02	<b>728</b>	<b>10.98</b>	762	11.48	790	12.15
20000	552	6.63	579	6.95	598	7.03	618	7.11	647	8.32	671	9.37	695	10.10	729	10.91	763	11.64	792	12.52
21500	555	7.30	583	9.01	602	8.90	621	8.80	650	9.38	674	10.33	697	11.20	731	11.78	765	13.03	795	13.69

FAN PERFORMANCE - 3RTH720GC3																				
External Static Pressure																				
Air	0.4		0.6		0.7		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
Flow	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	546	5.08	568	0.79	587	1.51	606	2.22	636	5.78	662	7.27	689	7.59	723	9.26	757	8.32	778	9.12
16000	547	5.42	570	2.06	590	2.64	609	3.23	638	6.33	664	7.74	690	8.15	724	9.64	758	9.04	781	9.82
17000	548	5.76	573	3.32	592	3.78	611	4.24	640	6.88	666	8.21	691	8.70	725	10.03	759	9.76	784	10.52
18000	550	6.10	575	4.58	594	4.92	613	5.25	642	7.43	667	8.67	693	9.25	727	10.41	761	10.48	786	11.23
19000	551	6.57	577	5.98	597	6.19	616	6.40	645	8.14	669	9.32	694	10.00	728	11.01	762	11.43	789	12.02
20000	552	6.63	579	6.95	598	7.03	618	7.11	647	8.32	671	9.37	695	10.10	729	10.91	763	11.64	792	12.52
<b>21000</b>	554	7.04	582	8.26	601	8.22	620	8.18	648	9.00	672	9.98	696	10.80	<b>730</b>	<b>11.45</b>	764	12.52	793	13.25
22000	555	7.57	584	9.75	603	9.58	623	9.41	652	9.75	675	10.68	698	11.60	732	12.10	766	13.53	797	14.12
22500	557	8.10	585	9.92	605	9.88	625	9.84	653	10.31	676	11.15	699	12.00	733	12.72	768	13.91	799	14.63

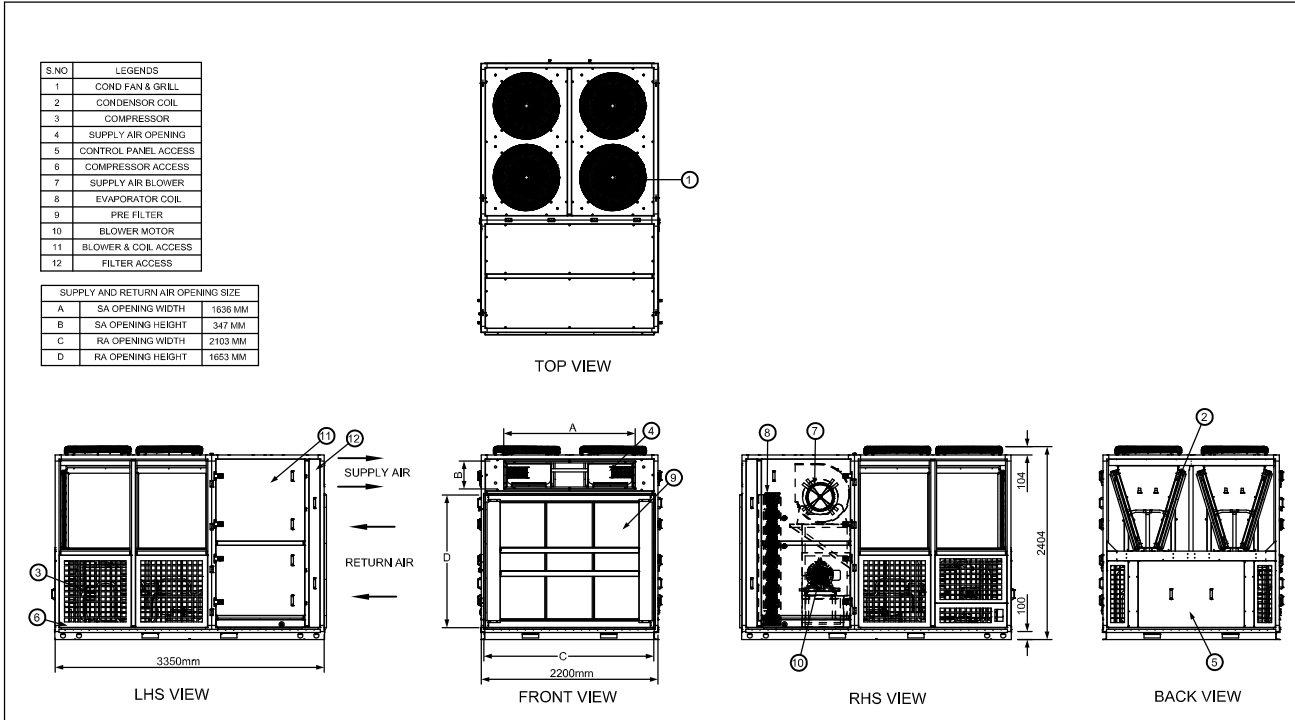
**Notes:**

- Data includes losses for filters, unit casting & wet coil
- Shaded region indicates alternate drive requirement
- Bold value in RPM indicates Blower speed with factory settings

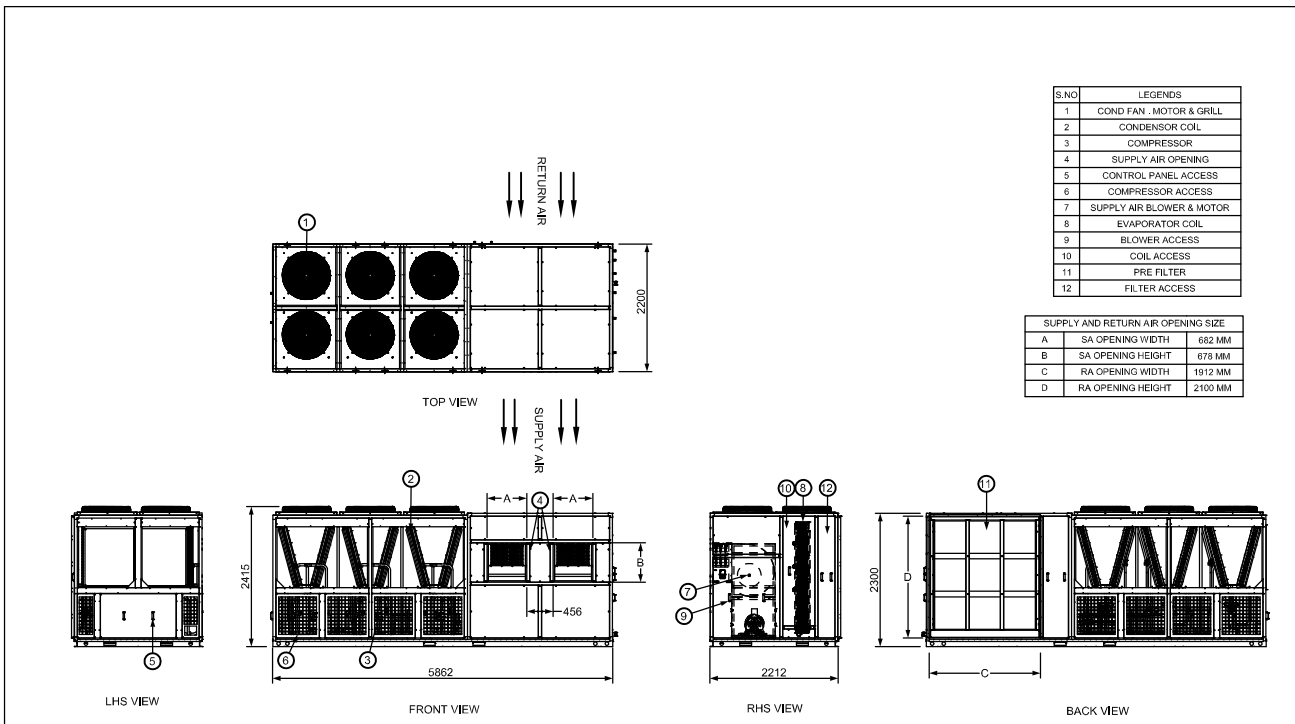
# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## GENERAL ARRANGEMENT DRAWINGS

540K - 600K



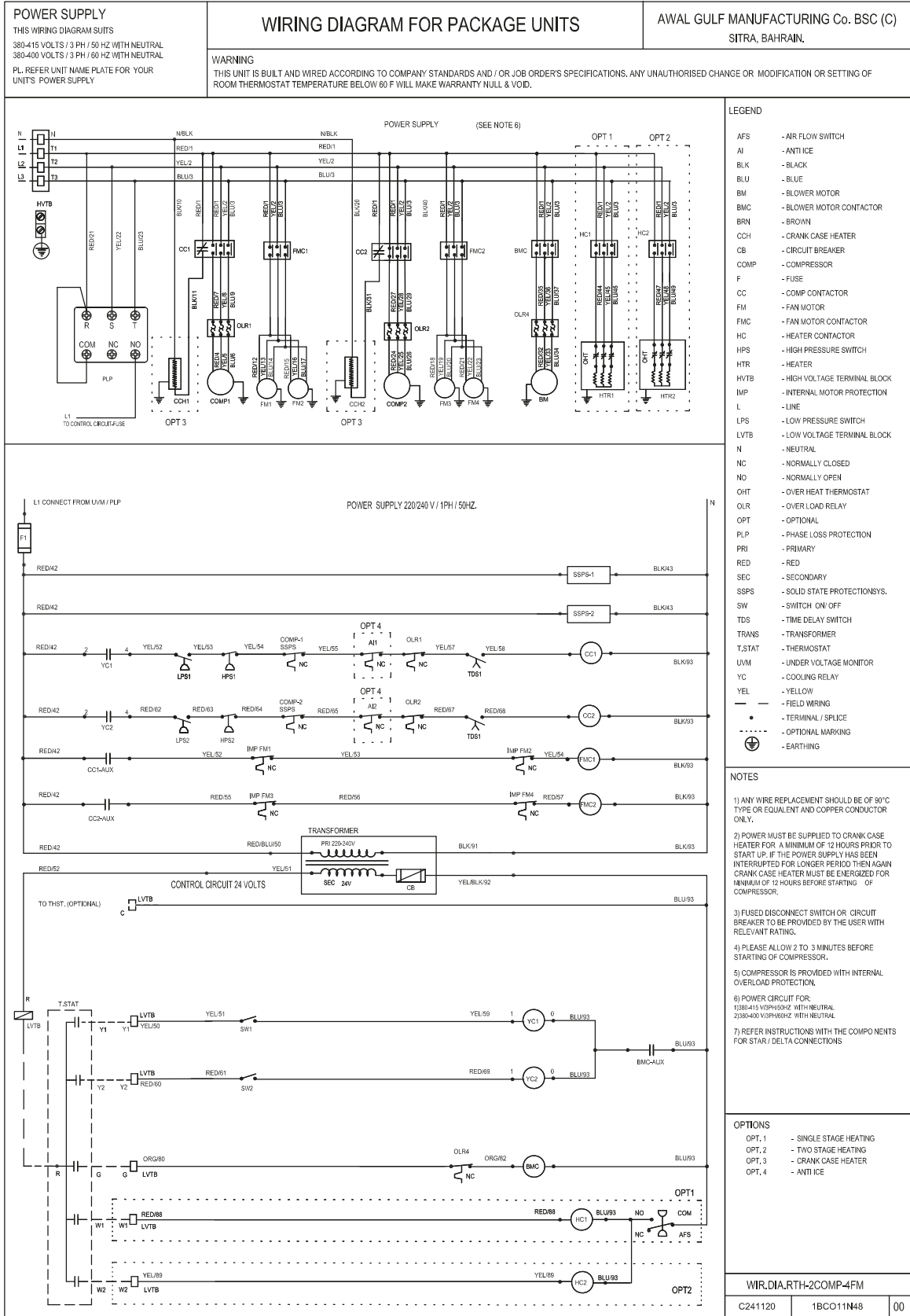
660K - 720K



# HIGH EER ROOF TOP PACKAGE - R410A PRODUCT DATA BOOK

## WIRING DIAGRAM

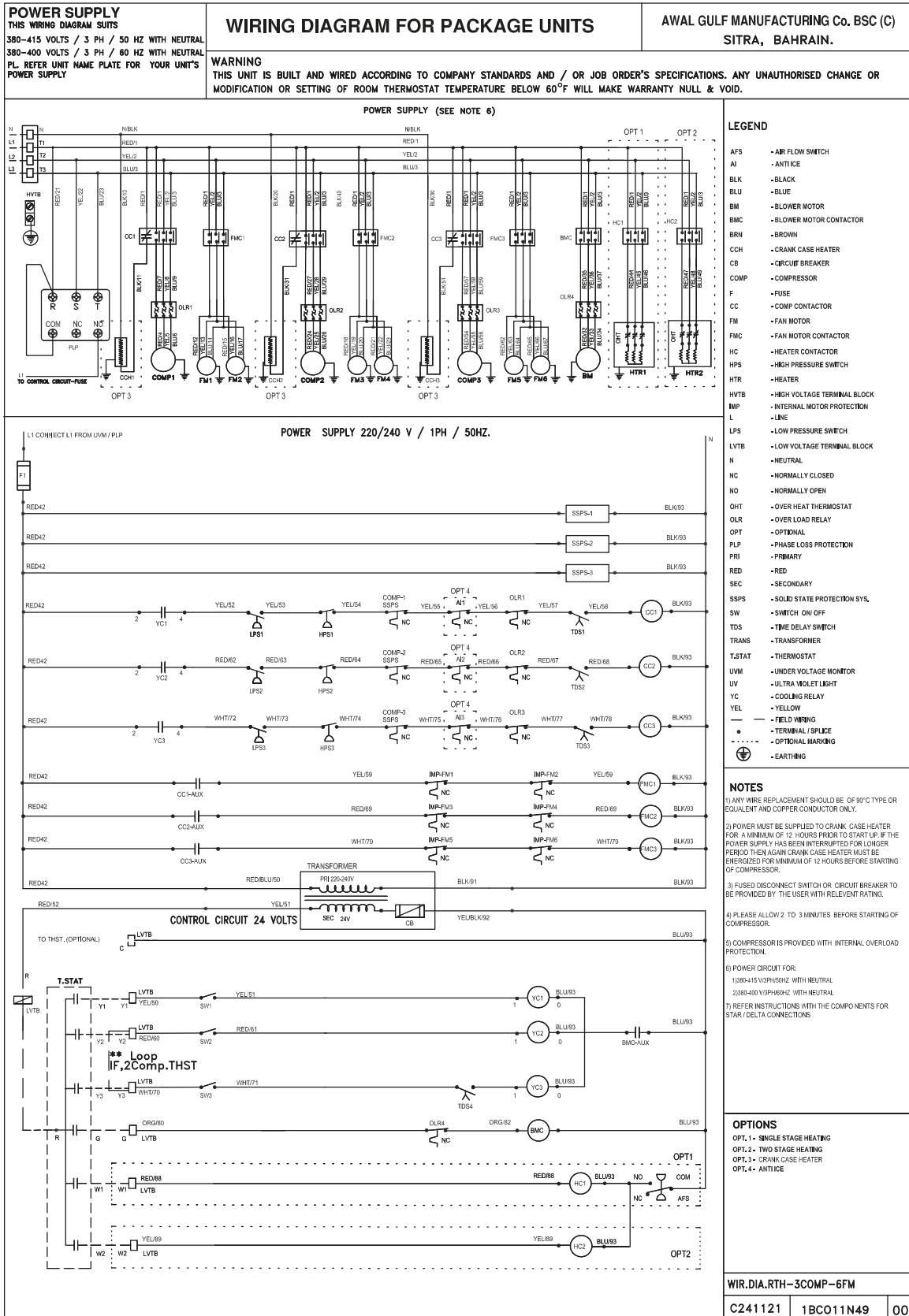
540K - 600K



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## WIRING DIAGRAM

660K - 720K



# AUTHORISED DISTRIBUTORS



16 St, Abdelaziz Eissa Block 35  
Ninth Region, Nasr City ,Egypt  
Tel. :+2 02-2473-2550  
E-mail : Info@ebaircondition.com



EBA



Tel: +973 1773 8333 | Fax: +973 1773 1541/1529  
P.O. Box 15919, Manama, Kingdom of Bahrain  
Email: export@awalgulf.com.bh | Website: www.awalgulf.com

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