REFRIGERATION AGENCIES PTY LTD

FRIGO pack

R404A Refrigerant

R507A Refrigerant

R134A Refrigerant

Copeland Scroll

STANDARD UNIT WITH:

Copeland ZB Scroll Compressors for medium temp applications on R404A/R507A/R134A

Copeland ZB & ZF Scroll Compressors for low temp applications on R404A/R507A

AIR COOLED PACKAGED CONDENSING UNITS

World Class Brands in World Class Refrigeration Systems

STANDARD INCLUSIONS:

- Fully wired electrical panel - includes space for additional electrical equipment
- Includes phase sequence and phase failure relay
- Rotary isolator switch
- Hydrophilic Blue aluminium fins and high efficiency inner grooved tube condensers
- Axial-flow, External rotor motors - vertical air discharge
- Powder coated frame for protection against the elements in exposed locations
- Liquid receiver - ASME certified
- Liquid line drier
- Liquid line sight glass
- Oil separator
- Suction line accumulator - Insulated suction line
- Dual pressure switch
- Crankcase heater
- HP fan control switch to cycle condenser fan in low ambient **
- Switch gear as standard - Schneider
- All compressors with Rotalock service values
- Flexible high pressure control hoses - Nara
- ZF Low Temperature models fitted with Emerson Discharge Temperature Control (DTC)

*** Two fan models only*

OPTIONAL EXTRAS:

- Fan speed controller
- Suction line filter
- Additional schrader connections
- SWEP brazed plate heat exchanger for heat reclaim applications
- SWEP brazed plate heat exchanger for liquid chiller applications
- Water pump, flow control valves and plumbing for liquid chiller applications
- Plant status lamps

Power supply to all models in this series 415V/3N/50Hz

Power supply to all condenser fans in this series 240V/IN/50Hz

HEAT RECOVERY

OPTIONAL EXTRA

Typical SWEP Brazed Plate Heat Exchanger used in desuperheater applications to capture low grade heat for water heating and in fluid chiller applications as the refrigerant to fluid evaporator.

Innovative Refrigeration Solutions

FRIGO PACK PRODUCT RANGE

Description	Operating Range	Nominal HP	Models	Ambient	Capacity Range
Med Temp ZB Scroll R404A/R507A	+5C to -15C	2HP to 15HP	3** / 12	+35C	3.9kW to 29kW @ -5C SST
				+43C	3.4kW to 26kW @ -5C SST
Med Temp ZB Scroll R134A	+10C to -15C	2HP to 10HP	3** / 10	+35C	2.4kW to 11.8kW @ -5C SST
				+43C	2.3kW to 11.3kW @ -5C SST
Low Temp ZF Scroll R404A/R507A	-15C to -40C	3HP to 15HP	9	+35C	1.87kW to 10.1kW @ -35C SST
				+43C	1.68kW to 9.0kW @ -35C SST

*** Single phase models*

FEATURES:

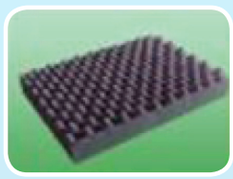
- Small footprint relative to cooling capacity
- Light weight relative to cooling capacity
- Compact robust framework
- Spacious compressor compartment
- Easy access to components for service and maintenance
- Electrical components pre-wired to common terminal in electrical control panel
- Pre-piped tested, evacuated and supplied with holding charge of dry nitrogen
- Low noise levels - low vibration levels
- Liquid sight glass visible from exterior

APPLICATIONS:

- All medium and low temperature commercial refrigeration applications on R404A, R507A and R134A refrigerant within operating envelope of compressor and parameters of the unit
- Typical applications include cold rooms, freezer rooms, refrigerated display cabinets, liquid chillers.

INTERNAL SONIC LINER

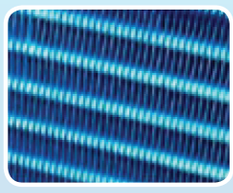
The compressor compartment is internally lined with sound absorbing foam 'sonic wave liner' to shield and reduce noise generated by the compressor from transferring outwards.



HYDROPHILIC BLUE FIN CONDENSERS

All Refrigerations Agencies condensing units feature treated aluminium blue fins with hydrophilic qualities.

This treatment means the condenser fins are protected against corrosive elements and they have a longer lifespan in aggressive surroundings such as sea spray and airborne chemical environments.



Innovative Refrigeration Solutions

DESIGN BENEFITS - SCROLL TECHNOLOGY

Better Liquid Handling
Axial and radial compliance allow the scroll members to separate in the presence of liquid refrigerant - providing protection against liquid damage.

Greater Efficiency
More efficient over the entire operating range.

Improved Sound
Operating at lower sound and vibration levels than reciprocating compressors.

Unmatched Reliability
- 70% fewer moving parts
- Ability to start under any system load
- Easy to service and maintain due to their compact size and light weight
- Engineered for optimum performance with today's chlorine-free refrigerants
- No complex internal suction and discharge valves for quieter operation and higher reliability

FEATURES OF COPELAND SCROLL COMPRESSORS

- Improved temperature protection
- Internal pressure protection
- New quiet shutdown solution
- Optimised scroll and seal design for improved efficiency
- Redesigned shell for quieter operation
- High efficiency motor

COPELAND SCROLL COMPRESSORS

When Emerson first pioneered the use of scroll technology in compressors, it changed the industry forever. Since then the Copeland Scroll technology remains at the forefront of HVACR applications, impressing contractors and original equipment manufacturers (OEMs) with its superior efficiency, proven reliability and ease of installation.

With the broadest product line in the industry, Copeland Scroll compressors range from one to 60 horsepower and are installed in more than 75 million locations around the world.

HOW SCROLL COMPRESSORS WORK

Copeland Scroll compressors have one scroll, or spiral, orbiting in a path defined by a matching fixed scroll. The fixed scroll is attached to the compressor body.

The orbiting scroll is coupled to the crankshaft and orbits, rather than rotates. The orbiting motion creates a series of gas pockets travelling between the two scrolls.

On the outer portion of the scrolls, the pockets draw in gas, and then move into the centre of the scroll, where the gas is discharged. As the gas moves into the increasingly smaller inner pockets, the temperature and pressure increase to the desired discharge pressure.

FRIGO PACK PACKAGED Air-Cooled Condensing Units Capacity Tables										
Medium Temperature - R134A - Ratings in Watts										
Cond. Unit Model	Comp Model	NOM HP	POWER SUPPLY	Ambient °C	SATURATED SUCTION TEMPERATURE					
					-15C	-10C	-5C	0C	+5C	+10C
R134A MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE										
FP200MY/1	ZB15KQE-PFJ	2	SINGLE PHASE 230/1N/50	28	1732	2129	2578	3068	3587	4125
				35	1586	1981	2432	2849	3385	3949
				43	1509	1857	2361	2844	3369	3950
FP300MY/1	ZB21KQE-PFJ	3		28	2550	3104	3776	4472	5183	6016
				35	2366	2838	3514	4154	4891	5705
				43	2165	2687	3358	4081	4847	5719
FP350MY/1	ZB26KQE-PFJ	3-1/2		28	3000	3748	4536	5356	6333	7289
				35	2699	3436	4134	4960	5885	6892
				43	2494	3123	3993	4831	5797	6798
R134A MED TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE										
FP200MY/3	ZB15KQE-TFD	2	THREE PHASE 415/3N/50	28	1732	2129	2578	3068	3587	4125
				35	1586	1981	2432	2849	3385	3949
				43	1509	1857	2361	2844	3369	3950
FP300MY/3	ZB21KQE-TFD	3		28	2550	3104	3776	4472	5183	6016
				35	2366	2838	3514	4154	4891	5705
				43	2165	2687	3358	4081	4847	5719
FP350MY/3	ZB26KQE-TFD	3-1/2		28	3000	3748	4536	5356	6333	7289
				35	2699	3436	4134	4960	5885	6892
				43	2494	3123	3993	4831	5797	6798
FP400MY/3	ZB29KQE-TFD	4		28	3527	4245	5112	6030	7050	8111
				35	3095	3889	4722	5621	6605	7717
				43	2887	3633	4562	5454	6502	7644
FP500MY/3	ZB38KQE-TFD	5		28	4358	5336	6493	7709	9055	10425
				35	3838	4888	5968	7131	8448	9878
				43	3627	4597	5795	7029	8290	9780
FP600MY/3	ZB45KQE-TFD	6		28	5313	6465	7871	9340	10987	12643
				35	4664	5966	7289	8698	10301	11952
				43	4316	5481	6945	8442	10115	11863
FP700MY/3	ZB48KQE-TFD	7		28	5868	7183	8576	10165	11837	13590
				35	5216	6603	7964	9471	11129	12964
				43	4921	6146	7707	9246	10948	12822
FP800MY/3	ZB58KQE-TFD	8		28	6854	8260	9783	11365	13023	14771
				35	5579	7550	9002	10534	12203	13891
				43	5154	6490	8591	10193	11934	13650
FP900MY/3	ZB66KQE-TFD	9		28	7714	9225	10868	12615	14439	16260
				35	6291	8482	10069	11788	13583	15437
				43	5848	7331	9670	11423	13371	15274
FP1000MY/3	ZB76KQE-TFD	10		28	9037	10853	12845	14979	17194	19438
				35	7293	9918	11837	13890	16060	18292
				43	6787	8485	11282	13386	15693	17955

FRIGO PACK PACKAGED Air-Cooled Condensing Units Capacity Tables

Medium Temperature R404A/R507 - Ratings in Watts

Cond. Unit Model	Comp Model	NOM HP	POWER SUPPLY	Ambient °C	SATURATED SUCTION TEMPERATURE							
					-25C	-20C	-15C	-10C	-5C	0C	+5C	+7C
R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE												
FP200MZ/1	ZB15KQE-PFJ	2	SINGLE PHASE 230/1N/50	28	2008	2445	2899	3406	3949	4519	5110	5420
				35	1804	2264	2764	3317	3877	4508	5157	5432
				43	1117	1833	2302	2827	3381	3991	4610	4906
FP300MZ/1	ZB21KQE-PFJ	3		28	2991	3615	4250	4958	5717	6515	7336	7773
				35	2882	3481	4175	4912	5705	6611	7539	7902
				43	2113	3069	3653	4347	5138	5974	6917	7281
FP350MZ/1	ZB26KQE-PFJ	3-1/2		28	3619	4356	5166	6058	7014	8039	9108	9676
				35	3450	4165	4981	5886	6903	7978	9160	9658
				43	2499	3604	4353	5215	6178	7228	8392	8858
R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE												
FP200MZ/3	ZB15KQE-TFD	2	THREE PHASE 415/3N/50	28	2008	2445	2899	3406	3949	4519	5110	5420
				35	1804	2264	2764	3317	3877	4508	5157	5432
				43	1117	1833	2302	2827	3381	3991	4610	4906
FP300MZ/3	ZB21KQE-TFD	3		28	2991	3615	4250	4958	5717	6515	7336	7773
				35	2882	3481	4175	4912	5705	6611	7539	7902
				43	2113	3069	3653	4347	5138	5974	6917	7281
FP350MZ/3	ZB26KQE-TFD	3-1/2		28	3619	4356	5166	6058	7014	8039	9108	9676
				35	3450	4165	4981	5886	6903	7978	9160	9658
				43	2499	3604	4353	5215	6178	7228	8392	8858
FP400MZ/3	ZB29KQE-TFD	4		28	4046	4908	5808	6780	7825	8924	10063	10663
				35	4047	4748	5668	6687	7792	8991	10242	10942
				43	3339	4130	4978	5923	6974	8133	9395	10092
FP500MZ/3	ZB38KQE-TFD	5		28	5199	6256	7423	8685	10033	11463	12952	13740
				35	4973	5979	7197	8477	9917	11453	13092	13792
				43	3605	5229	6287	7531	8897	10410	12045	12720
FP600MZ/3	ZB45KQE-TFD	6		28	6197	7470	8838	10355	11985	13719	15535	16489
				35	5912	7156	8566	10118	11827	13701	15697	16487
				43	4311	6244	7502	8947	10558	12358	14349	15125
FP700MZ/3	ZB48KQE-TFD	7		28	5735	8041	9516	11123	12846	14658	16550	17547
				35	5338	7769	9285	10951	12776	14747	16845	17974
				43	4916	6748	8147	9702	11427	13328	15403	16540
FP800MZ/3	ZB58KQE-TFD	8		28	7359	9464	11284	13210	15250	17407	19676	20885
				35	6875	9006	11021	13109	15219	17659	20143	21488
				43	5658	7409	9486	11612	13810	16126	18588	19934
FP900MZ/3	ZB66KQE-TFD	9		28	8275	10591	12473	14496	16648	18686	21248	22482
				35	7715	10301	12274	14403	16537	19173	21794	23184
				43	6866	8967	10866	12905	15117	17518	20116	21538
FP1000MZ/3	ZB76KQE-TFD	10		28	9921	12747	15099	17645	20365	23221	26195	27756
				35	9159	12329	14822	17520	20276	23519	26801	28550
				43	8145	10630	13049	15653	18455	21470	24703	26458
FP1300MZ/3	ZB95KQE-TFD	13		28	11915	15103	17772	20557	23488	26567	29801	31534
				35	10845	10756	17438	20561	23432	27197	30798	32743
				43	7464	6715	14790	18142	21510	24981	28636	30630
FP1500MZ/3	ZB114KQE-TFD	15		28	13817	18059	21418	24936	28615	32431	36362	38430
				35	9380	12761	20767	24685	28795	33105	37625	40028
				43	5476	7905	17589	21626	25840	30272	34963	37483

FRIGO PACK PACKAGED Air-Cooled Condensing Units Capacity Tables										
Low Temperature R404A/R507 - Ratings in Watts										
Cond. Unit Model	Comp Model	NOM HP	POWER SUPPLY	Ambient °C	SATURATED SUCTION TEMPERATURE					
					-40C	-35C	-30C	-25C	-20C	-15C
R404A LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZF SCROLL COMPRESSORS - THREE PHASE										
FP300F/LZ/3	ZF09K4E	3	THREE PHASE 415/3N/50	28	1536	1895	2292	2719	3197	3726
				35	1501	1866	2267	2697	3196	3737
				43	1347	1680	2040	2450	2894	3426
FP350F/LZ/3	ZF11K4E	3-1/2		28	1988	2449	2980	3521	4131	4822
				35	1941	2409	2929	3478	4122	4843
				43	1718	2147	2612	3126	3703	4386
FP400F/LZ/3	ZF13K4E	4		28	2196	2745	3371	4025	4723	5454
				35	2155	2682	3296	3945	4675	5503
				43	1981	2417	2924	3503	4189	4967
FP500F/LZ/3	ZF15K4E	5		28	2790	3475	4202	5066	5971	6931
				35	2707	3345	4091	4932	5890	6908
				43	2404	2975	3681	4411	5247	6221
FP600F/LZ/3	ZF18K4E	6		28	3467	4252	5197	6201	7356	8594
				35	3389	4180	5079	6115	7270	8523
				43	2969	3681	4500	5438	6481	7661
FP750F/LZ/3	ZF24K4E	7-1/2		28	4204	5234	6374	7604	8973	10448
				35	4050	5117	6280	7527	8927	10456
				43	3475	4511	5564	6728	7990	9430
FP1000F/LZ/3	ZF33K4E	10		28	5812	7159	8663	10323	12138	14096
				35	5550	6946	8461	10161	12047	14133
				43	4841	6142	7545	9080	10821	12789
FP1300F/LZ/3	ZF40K4E	13		28	7123	8908	10838	12911	15227	17707
				35	6852	8689	10585	12742	15079	17680
				43	6019	7679	9433	11360	13495	15885
FP1500F/LZ/3	ZF48K4E	15		28	8487	10400	12568	14931	17560	20325
				35	8194	10118	12291	14768	17478	20448
				43	7232	9011	11004	13231	15798	18602

Refrigeration Injection

For low temperature ZF models, liquid injection is required to keep discharge gas temperature within safe limits. The compressor is supplied with a 13/16" diameter injection stub to accept a discharge temperature control (DTC) valve for liquid injection. Inside the compressor, injection takes place in two distinct pockets of the spirals without influencing the suction process. Injection increases the mass flow through the system slightly.

DTC – Discharge Temperature Control

Liquid injection is achieved by a DTC control valve. The DTC valve eliminates the need for capillary tube, liquid injection solenoid valve and current relay.

ZF compressors (BOM 556) include a well in the top cap, combined with a valve cap.

The Copeland DTC valve is equipped with a custom bulb profile, which must be installed in the top cap of the compressor, sensing the temperature closest to the discharge port. The bulb/bellows combination injects only when cooling is needed and in the required amounts.

DTC Valve Specifications

Set Point: 89.4°C ± 2.4°C
Liquid Line Connection: 3/8" Braze

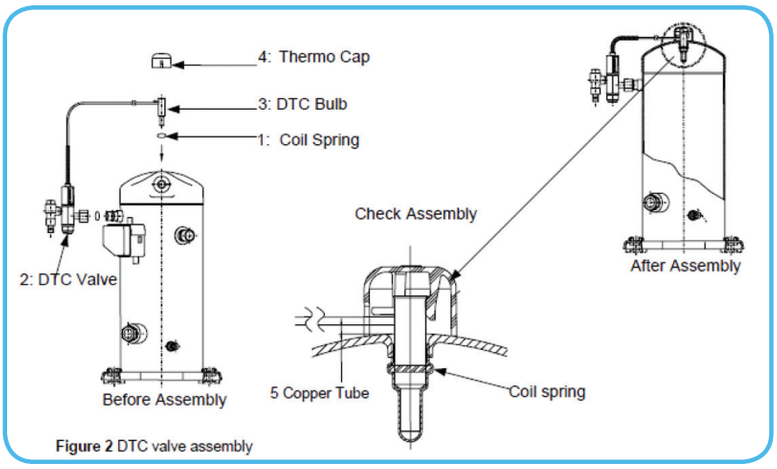


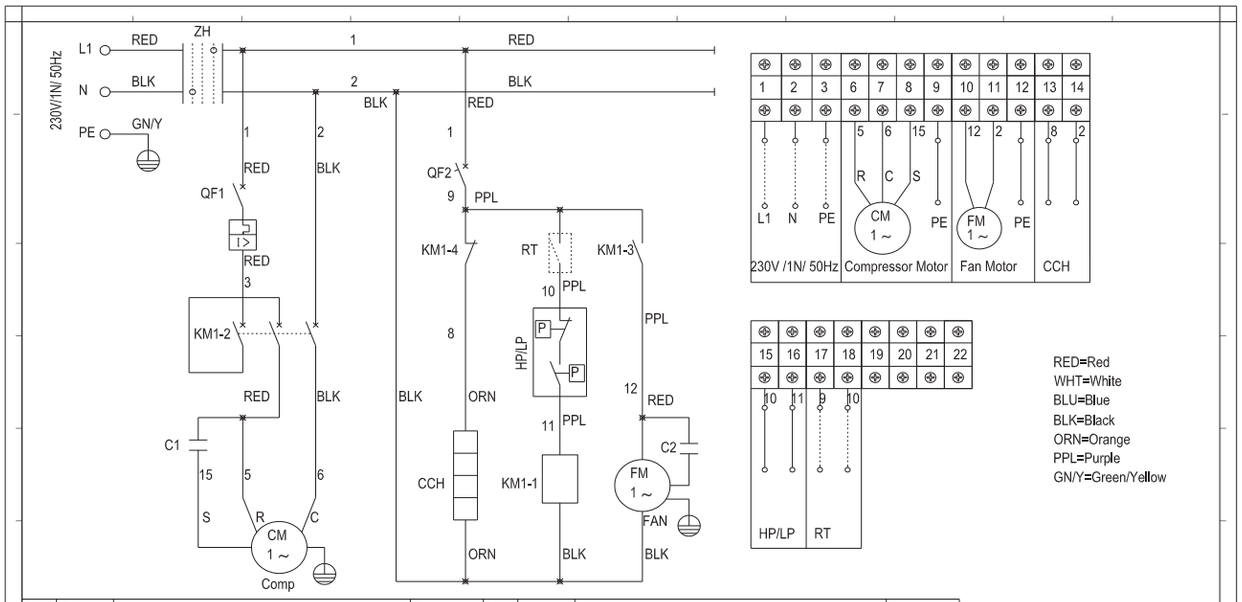
Figure 2 DTC valve assembly

Model No.	COMPRESSOR					CONDENSER		
	Model	NOM HP	Power Supply	Disp. m3/hr	MRA Amps	Qty & Rows	Capacity Watt Per KTD	Heat Exchange Surface m2
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE								
FP200MZ/1	ZB15KQE-PFJ	2.0	230/1N/50	5.9 m3/hr	16.5	1 x 3	590	17.1
FP300MZ/1	ZB21KQE-PFJ	3		8.6 m3/hr	19.5	1 x 2	990	24.6
FP350MZ/1	ZB26KQE-PFJ	3-1/2		9.9 m3/hr	22.5	1 x 3	1230	34.4
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE								
FP200MZ/3	ZB15KQE-TFD	2.0	415/3N/50Hz	5.9 m3/hr	5.0	1 x 3	590	17.1
FP300MZ/3	ZB21KQE-TFD	3.0		8.6 m3/hr	5.0	1 x 2	990	24.6
FP350MZ/3	ZB26KQE-TFD	3.5		9.9 m3/hr	7.4	1 x 3	1230	34.4
FP400MZ/3	ZB29KQE-TFD	4.0		11.4 m3/hr	7.9	1 x 3	1230	34.4
FP500MZ/3	ZB38KQE-TFD	5.0		14.4 m3/hr	9.6	1 x 4	1470	45.9
FP600MZ/3	ZB45KQE-TFD	6.0		17.1 m3/hr	10.1	1 x 5	1840	57.4
FP700MZ/3	ZB48KQE-TFD	7.0		18.8 m3/hr	13.6	1 x 5	1840	57.4
FP800MZ/3	ZB58KQE-TFD	8.0		22.1 m3/hr	16.4	2 x 3	2460	34.4 x 2
FP900MZ/3	ZB66KQE-TFD	9.0		25.7 m3/hr	17.3	2 x 3	2460	34.4 x 2
FP1000MZ/3	ZB76KQE-TFD	10.0		28.8 m3/hr	20.0	2 x 4	2940	45.9 x 2
FP1300MZ/3	ZB95KQE-TFD	13.0		36.4 m3/hr	26.4	2 x 4	2940	45.9 x 2
FP1500MZ/3	ZB114KQE-TFD	15.0		43.4 m3/hr	30.7	2 x 5	3680	57.4 x 2
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZF SCROLL COMPRESSORS - THREE PHASE								
FP300F/LZ/3	ZF09K4E-TFD	3.0	415V/3N/50Hz	8.0m3/hr	6.0	1 x 3	590	17.1
FP350F/LZ/3	ZF11K4E - TFD	3.5		9.9m3/hr	7.0	1 x 2	990	24.6
FP400F/LZ/3	ZF13K4E-TFD	4.0		11.8m3/hr	8.0	1 x 2	990	24.6
FP500F/LZ/3	ZF15K4E-TFD	5.0		14.5m3/hr	10.0	1 x 3	1230	34.4
FP600F/LZ/3	ZF18K4E-TFD	6.0		17.2m3/hr	12.0	1 x 4	1470	45.9
FP750F/LZ/3	ZF24K4E-TFD	7.5		20.9m3/hr	16.1	1 x 5	1840	57.4
FP1000F/LZ/3	ZF33K4E-TFD	10.0		28.8m3/hr	22.3	2 x 3	2460	34.4 x 2
FP1300F/LZ/3	ZF40K4E-TFD	13.0		35.6m3/hr	25.1	2 x 4	2940	45.9 x 2
FP1500F/LZ/3	ZF48K4E-TFD	15.0		42.8m3/hr	30.6	2 x 4	2940	45.9 x 2
FRIGO PACK PACKAGED CONDENSING UNITS - R134A MED TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE								
FP200MY/1	ZB15KQE-PFJ	2.0	230/1N/50	5.9 m3/hr	16.5	1 x 3	590	17.1
FP300MY/1	ZB21KQE-PFJ	3.0		8.6 m3/hr	19.5	1 x 2	990	24.6
FP350MY/1	ZB26KQE-PFJ	3.5		9.9 m3/hr	22.5	1 x 3	1230	34.4
FRIGO PACK PACKAGED CONDENSING UNITS - R134A MED TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE								
FP200MY/3	ZB15KQE-TFD	2.0	415V/3N/50Hz	5.9 m3/hr	5.0	1 x 3	590	17.1
FP300MY/3	ZB21KQE-TFD	3.0		8.6 m3/hr	5.0	1 x 2	990	24.6
FP350MY/3	ZB26KQE-TFD	3.5		9.9 m3/hr	7.4	1 x 3	1230	34.4
FP400MY/3	ZB29KQE-TFD	4.0		11.4 m3/hr	7.9	1 x 3	1230	34.4
FP500MY/3	ZB38KQE-TFD	5.0		14.4 m3/hr	9.6	1 x 4	1470	45.9
FP600MY/3	ZB45KQE-TFD	6.0		17.1 m3/hr	10.1	1 x 5	1840	57.4
FP700MY/3	ZB48KQE-TFD	7.0		18.8 m3/hr	13.6	1 x 5	1840	57.4
FP800MY/3	ZB58KQE-TFD	8.0		22.1 m3/hr	16.4	2 x 3	2460	34.4 x 2
FP900MY/3	ZB66KQE-TFD	9.0		25.7 m3/hr	17.3	2 x 3	2460	34.4 x 2
FP1000MY/3	ZB76KQE-TFD	10.0		28.8 m3/hr	20.0	2 x 4	2940	45.9 x 2

CONDENSER FANS					Receiver Details		Suct Line Size Imp	General Specifications					
								Unit Dimensions - mm's			Weight	Drwg	Sound Pressure dBA
No x Dia mm	Power Input Watts	MRA Amps	Air Flow L/sec	Power Supply	Cap kg @ 80% Full	Liquid Line Size Imp		Length	Width	Height	kg	No	
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE													
1 x 350	1 x 145	1 x 0.7	850	230/1N/50	3.9	3/8"	7/8"	1070	480	750	± 85	AX	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	7/8"	1285	625	820	± 110	BY	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	7/8"	1285	625	820	± 125	BY	55
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 MED/LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE													
1 x 350	1 x 145	1 x 0.7	850	230V/1N/50Hz	3.9	3/8"	7/8"	1070	480	750	± 85	AX	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	7/8"	1285	625	820	± 110	BY	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	7/8"	1285	625	820	± 125	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2"	7/8"	1285	625	820	± 150	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2"	7/8"	1285	625	820	± 155	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2"	7/8"	1285	625	820	± 160	BY	55
2 x 350	2 x 145	2 x 0.7	1700		12.0	5/8"	7/8"	1660	790	1015	± 265	CZ	60
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-1/8"	1660	790	1015	± 270	CZ	60
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 270	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 275	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 275	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 295	CZ	65
FRIGO PACK PACKAGED CONDENSING UNITS - R404A/R507 LOW TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZF SCROLL COMPRESSORS - THREE PHASE													
1 x 350	1 x 145	1 x 0.7	850	230V/1N/50Hz	3.9	3/8"	5/8"	1070	480	750	± 90	AX	55
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	5/8"	1285	625	820	± 120	BY	55
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8"	5/8"	1285	625	820	± 125	BY	55
2 x 350	2 x 145	2 x 0.7	1700		6.0	1/2"	7/8"	1285	625	820	± 150	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2"	7/8"	1285	625	820	± 155	BY	60
2 x 350	2 x 145	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 260	BY	60
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 270	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-3/8"	1660	790	1015	± 270	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8"	1-5/8"	1660	790	1015	± 270	CZ	65
FRIGO PACK PACKAGED CONDENSING UNITS - R134A MED TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - SINGLE PHASE													
1 x 350	1 x 145	1 x 0.7	850	230/1N/50	3.9	3/8	7/8"	1070	480	750	± 85	AX	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8	7/8"	1285	625	820	± 110	BY	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8	7/8"	1285	625	820	± 125	BY	55
FRIGO PACK PACKAGED CONDENSING UNITS - R134A MED TEMP (TOP - VERTICAL AIR DISCHARGE) COPELAND ZB SCROLL COMPRESSORS - THREE PHASE													
1 x 350	1 x 145	1 x 0.7	850	230V/1N/50Hz	3.9	3/8	7/8"	1070	480	750	± 85	AX	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8	7/8"	1285	625	820	± 110	BY	50
2 x 350	2 x 145	2 x 0.7	1700		6.0	3/8	7/8"	1285	625	820	± 125	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2	7/8"	1285	625	820	± 150	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2	7/8"	1285	625	820	± 155	BY	55
2 x 350	2 x 145	2 x 0.7	1700		9.5	1/2	7/8"	1285	625	820	± 160	BY	55
2 x 350	2 x 145	2 x 0.7	1700		12.0	5/8	7/8"	1660	790	1015	± 265	CZ	60
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8	1-1/8"	1660	790	1015	± 270	CZ	60
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8	1-3/8"	1660	790	1015	± 270	CZ	65
2 x 500	2 x 355	2 x 3.5	4380		12.0	5/8	1-3/8"	1660	790	1015	± 275	CZ	65

Innovative Refrigeration Solutions

SINGLE PHASE (PFJ) - SINGLE FAN MODELS



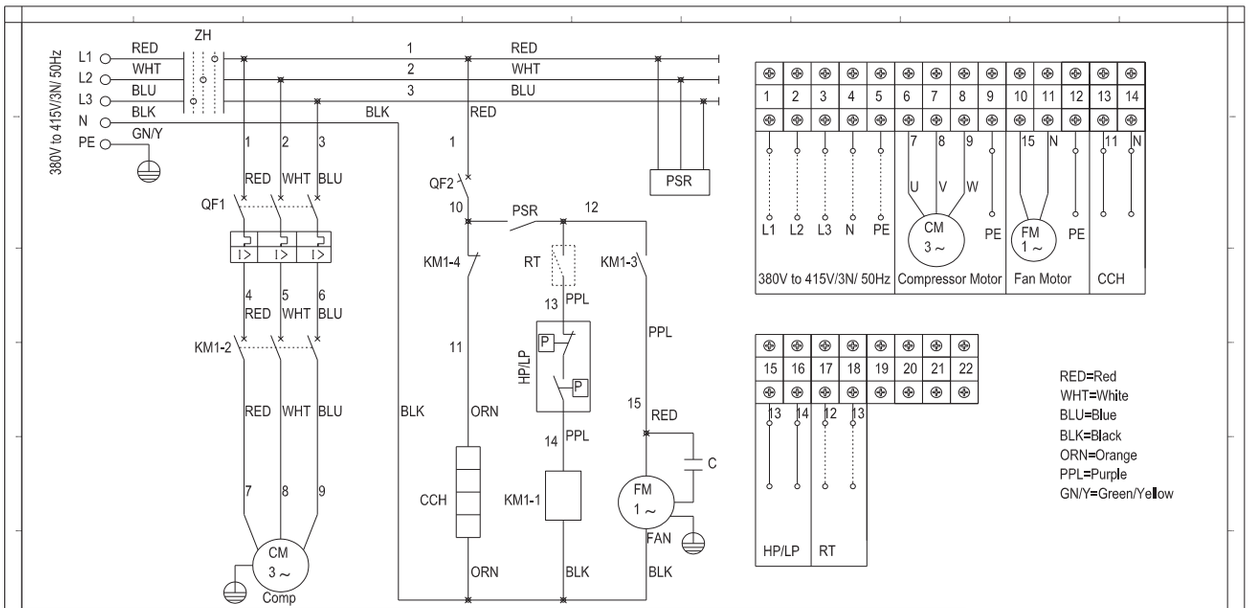
RED=Red
WHT=White
BLU=Blue
BLK=Black
ORN=Orange
PPL=Purple
GN/Y=Green/Yellow

No.	Code	Application	Remark	No.	Code	Application	Remark
1	FM	Condenser fan motor		9	CM	Compressor motor	
2	RT	Room thermostat or Remote control		10	CCH	Compressor crankcase heater	
3	HP/LP	HP/LP pressure control		11	KM1	Compressor contactor	
4	C1	Compressor capacitor		12	KM1-1	KM1 coil(control CM)	
5	QF2	Control circuit breaker-1Phase		13	KM1-2	KM1 main contact(control CM)	
6	QF1	Compressor circuit breaker-1Phase		14	KM1-3	N/O auxiliary contact(control FM)	
7	ZH	Single Phase rotary Isolator switch		15	KM1-4	N/C auxiliary contact(control CCH)	
8	C2	Condenser Fan Capacitor					

Note: ..... user wiring

TITLE:ELECTRICAL WIRING DIAGRAM
MODEL:Single Phase-Single Fan Unit-PFJ

THREE PHASE (TFD) - SINGLE FAN MODELS



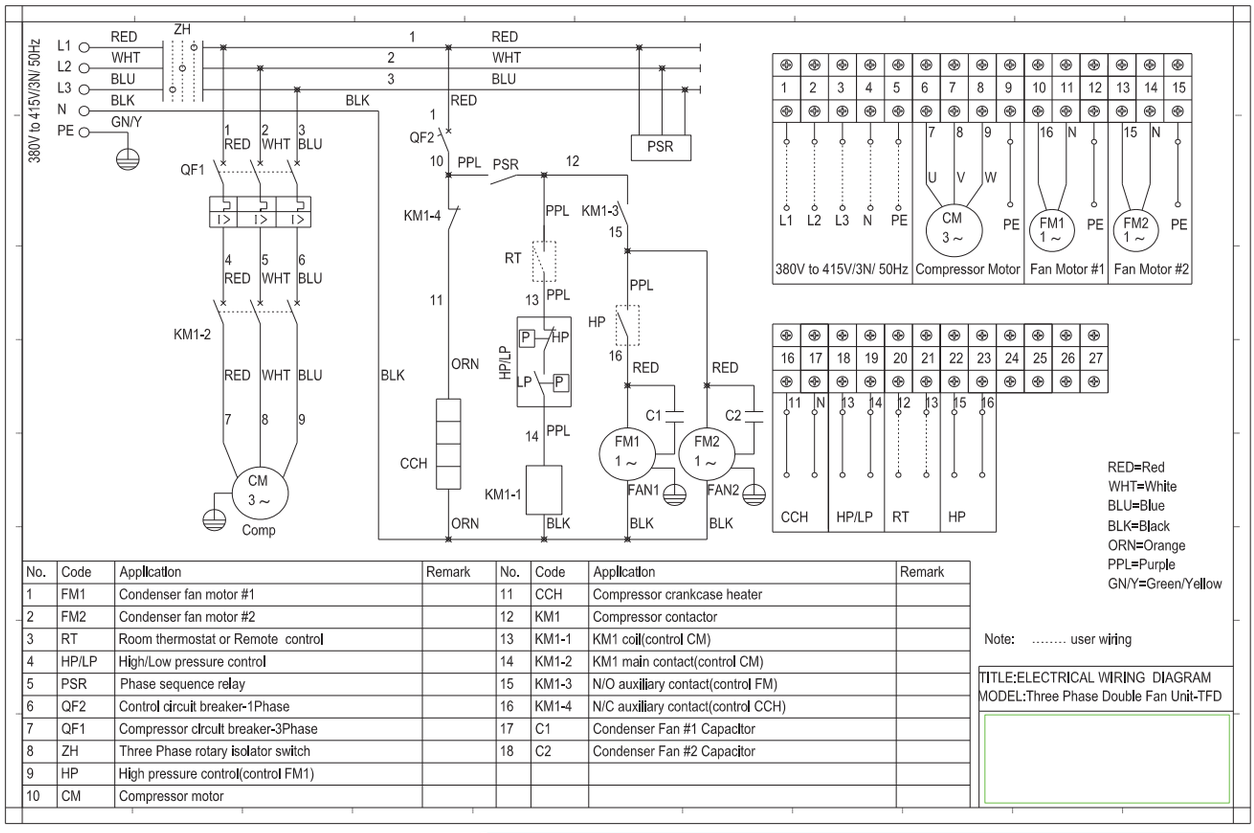
RED=Red
WHT=White
BLU=Blue
BLK=Black
ORN=Orange
PPL=Purple
GN/Y=Green/Yellow

No.	Code	Application	Remark	No.	Code	Application	Remark
1	FM	Condenser fan motor		9	CM	Compressor motor	
2	RT	Room thermostat or Remote control		10	CCH	Compressor crankcase heater	
3	HP/LP	HP/LP pressure control		11	KM1	Compressor contactor	
4	PSR	Phase sequence relay		12	KM1-1	KM1 coil(control CM)	
5	QF2	Control circuit breaker-1Phase		13	KM1-2	KM1 main contact(control CM)	
6	QF1	Compressor circuit breaker-3Phase		14	KM1-3	N/O auxiliary contact(control FM)	
7	ZH	Three Phase rotary isolator switch		15	KM1-4	N/C auxiliary contact(control CCH)	
8	C	Condenser Fan Capacitor		16	C	Condenser Fan Capacitor	

Note: ..... user wiring

TITLE:ELECTRICAL WIRING DIAGRAM
MODEL:Three Phase Single Fan Unit-TFD

THREE PHASE (TFD) - DOUBLE FAN MODELS

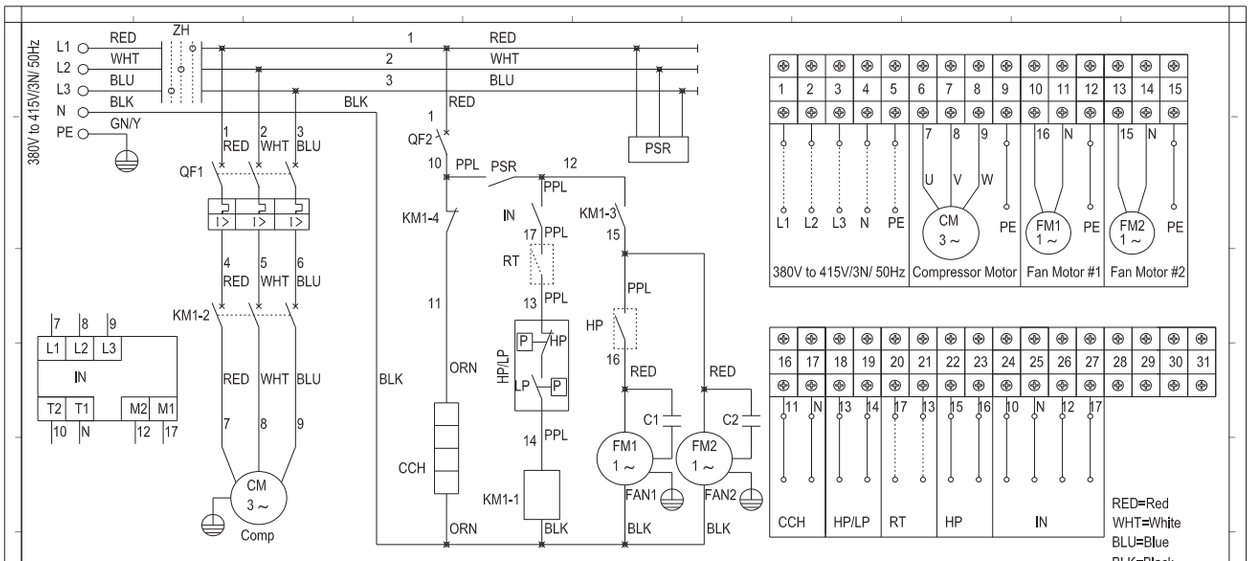


No.	Code	Application	Remark	No.	Code	Application	Remark
1	FM1	Condenser fan motor #1		11	CCH	Compressor crankcase heater	
2	FM2	Condenser fan motor #2		12	KM1	Compressor contactor	
3	RT	Room thermostat or Remote control		13	KM1-1	KM1 coil(control CM)	
4	HP/LP	High/Low pressure control		14	KM1-2	KM1 main contact(control CM)	
5	PSR	Phase sequence relay		15	KM1-3	N/O auxiliary contact(control FM)	
6	QF2	Control circuit breaker-1Phase		16	KM1-4	N/C auxiliary contact(control CCH)	
7	QF1	Compressor circuit breaker-3Phase		17	C1	Condenser Fan #1 Capacitor	
8	ZH	Three Phase rotary isolator switch		18	C2	Condenser Fan #2 Capacitor	
9	HP	High pressure control(control FM1)					
10	CM	Compressor motor					

Note: ..... user wiring

TITLE:ELECTRICAL WIRING DIAGRAM
MODEL:Three Phase Double Fan Unit-TFD

THREE PHASE (TWD) - DOUBLE FAN MODELS



No.	Code	Application	Remark	No.	Code	Application	Remark
1	FM1	Condenser fan motor #1		11	CM	Compressor motor	
2	FM2	Condenser fan motor #2		12	CCH	Compressor crankcase heater	
3	RT	Room thermostat or Remote control		13	KM1	Compressor contactor	
4	HP/LP	High/Low pressure control		14	KM1-1	KM1 coil(control CM)	
5	PSR	Phase sequence relay		15	KM1-2	KM1 main contact(control CM)	
6	QF2	Control circuit breaker-1Phase		16	KM1-3	N/O auxiliary contact(control FM)	
7	QF1	Compressor circuit breaker-3Phase		17	KM1-4	N/C auxiliary contact(control CCH)	
8	ZH	Three Phase rotary isolator switch		18	C1	Condenser Fan #1 Capacitor	
9	IN	Compressor Internal overload		19	C2	Condenser Fan #2 Capacitor	
10	HP	High pressure control(control FM1)					

Note: ..... user wiring

TITLE:ELECTRICAL WIRING DIAGRAM
MODEL:Three Phase Double Fan Unit-TWD

MODEL NOMENCLATURE - RA FRIGO PACK SERIES

Nomenclature

1 = RA Frigo Pack
2 = Operating parameters
3 = Horsepower

Legend

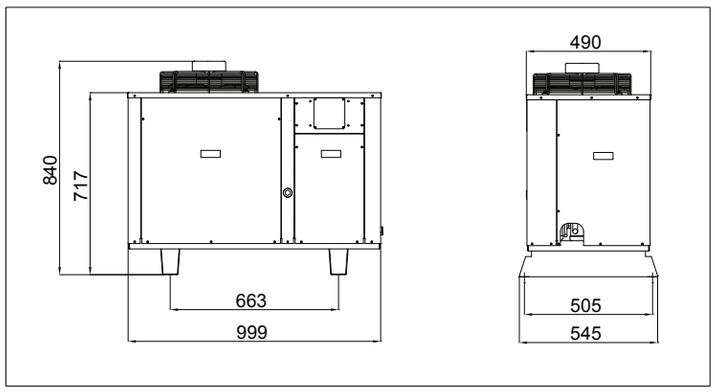
M = Medium Temp +5° to -15° SST
L = Low Temp -15° to -25° SST

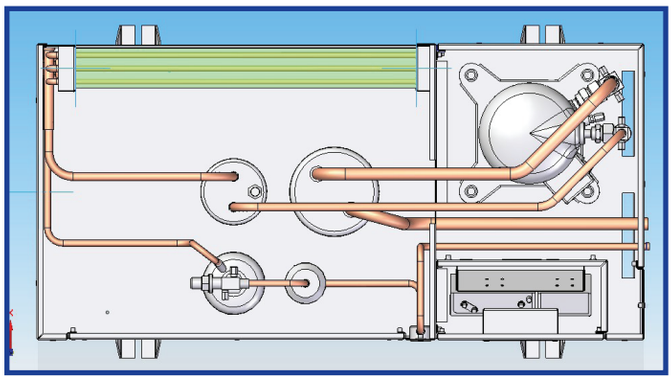
Model Example:

FP M 200
1 2 3

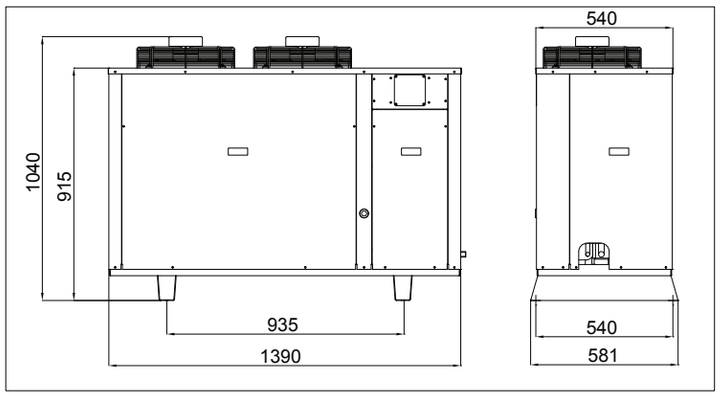
RA 'Frigo Pack' / Medium Temp / 2.0HP

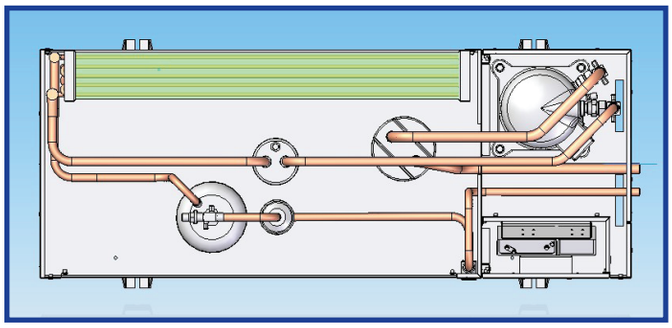
DRAWINGS & DIMENSIONS DATA - AX = SINGLE FAN MODEL



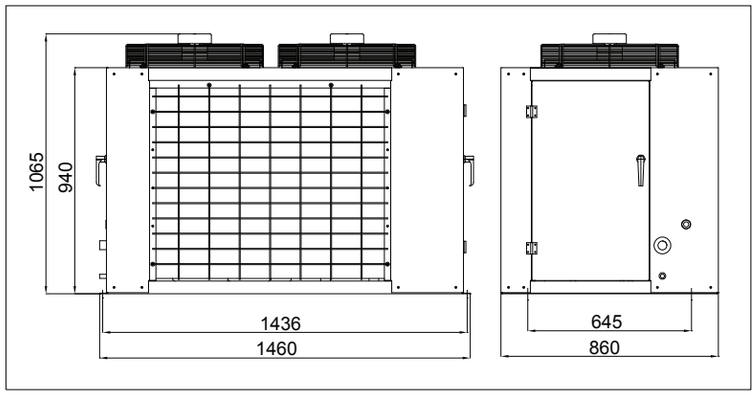


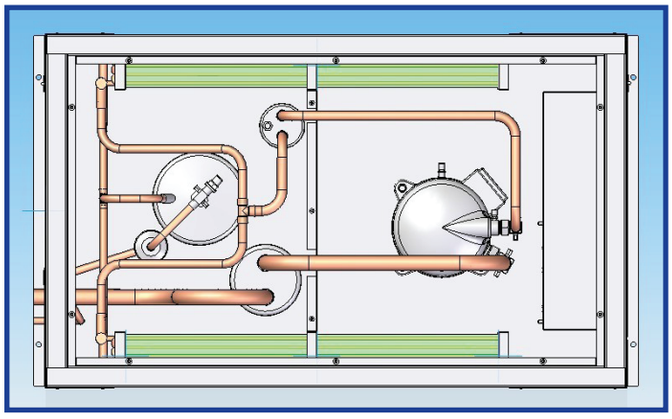
DRAWINGS & DIMENSIONS DATA - BY = DUAL FAN MODEL





DRAWINGS & DIMENSIONS DATA - CZ = LARGE DUAL FAN MODEL





REFRIGERATION AGENCIES PTY LTD

Re-Order No. RA-Frigo-Pack

Unit 2/16 Vicars Place, Wetherill Park,
Sydney, NSW, 2164, AUSTRALIA
Tel: +61 2 9725 3318 I Fax: +61 2 9725 5719
www.refrigerationagencies.com.au