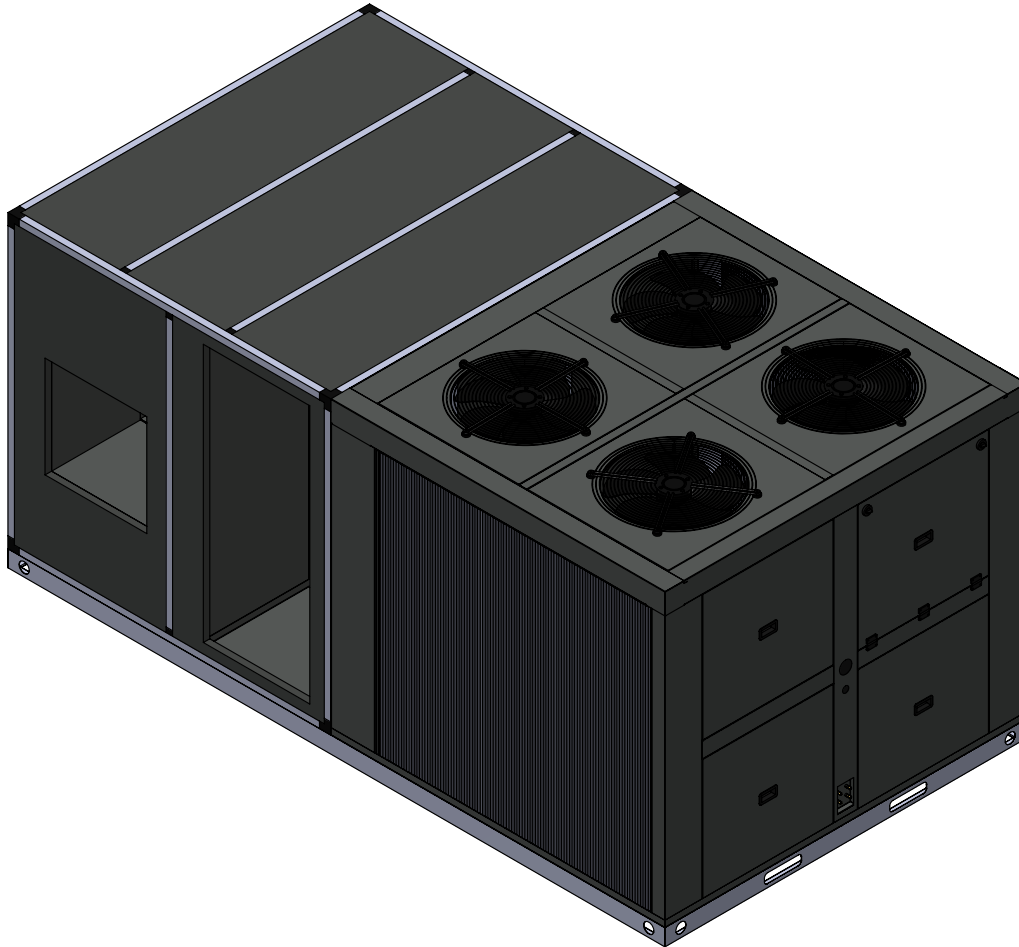




Commercial Manual
COSTERA Series
Air Cooled Horizontal Package Unit
40 TON



- Manufactured in large galvanized steel sheet.
- Powder coated paint system: For a long-lasting professional finish. Additional Modine-Luvata corrosion resistant spray added for extra protection.
- Scroll type compressor, which offers greater protection against liquid damage. More efficient throughout its operational range; It operates at lower sound and vibration levels than traditional compressors.
- Serpentin evaporator and condenser made of copper tubes and aluminum fins.
- Easy-access panel to compressors.
- Certified electric motor (PSC motor).
- Compact unit of four cooling circuits.
- High and low pressure switches.
- Bi-metal electrical protector.
- High capacity filter dryer.
- Pulley-transmission centrifugal motor-fan coupling.
- Fully insulated evaporator-fan compartment with easy-access hinged panels.
- Stainless steel rivet-nut machine-threaded hex head screw-fixed service panels.
- Reinforced iron metal base with forklift openings.

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This document will provide relevant information about the equipment. All the information included in this manual is subject to changes without prior notice. The suggestions of this manual are addressed to the personnel in charge of planning, installing, implementing, and maintaining the equipment, having corresponding knowledge for the realization of these type of works.



WARNING

Installation, adjustment, alteration, service or maintenance can cause personal injuries, death, or property damage.

The installation and service must be carried out by a professional or equivalent professional installer or a service agency.



CAUTION

Physical contact with edges while applying excessive force or rapid movement with metal can cause personal injury. Be careful when working near these areas during installation or during the service of this equipment.

Precautions

In the following document you can find several useful suggestions on the ignition, use and maintenance of your air cooled horizontal package unit. Preventive care will help you save time and money during the useful life of the unit.

Precaution

- Contact an authorized technician in case of requiring the repair or maintenance of this unit.
- Contact an authorized installer to install this unit.
- In case of replacement of supply cables, this activity can only be carried out by authorized personnel.
- The installation must be carried out only by authorized personnel in accordance with wiring standards.
- The electrical installation must be carried out in accordance with current legal norms.
- Make sure the electric service is adequate for the selected equipment model.
- Make sure the equipment is correctly installed. To avoid electrical discharges and possible fires, the correct connection is important.
- If the voltage supplied to this equipment is outside the specified range, the equipment will not work and this can cause the main components of the equipment (compressors - motors) and other electrical components to burn out.
- Do not store or use gasoline or other flammable products near this equipment or other artifacts.

Incorrect manipulation due to lack of knowledge of the instructions or suggestions described in this manual can harm the unit. We do not assume any responsibility for damages derived from incorrect, inappropriate or not planned use, or to consequences of unauthorized repairs or modifications. Keep in mind that this document is only valid for the specified equipment and not for complete installation.

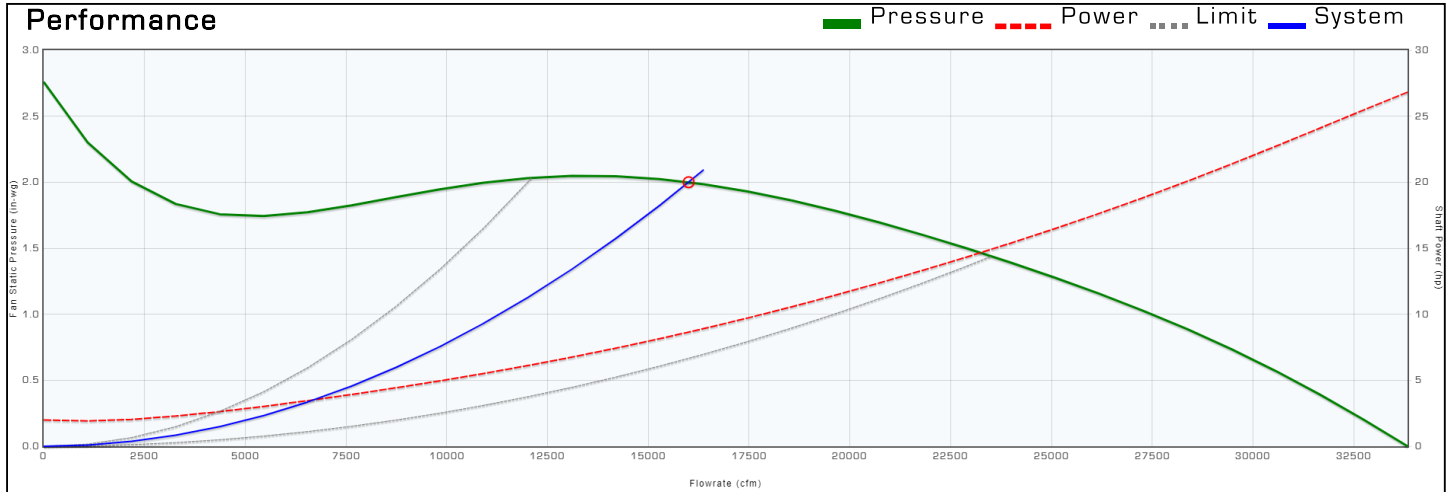
Technical Specifications

	GXPK480DG4AB	GXPK480DG7AB
GENERAL DATA		
Cooling Capacity (BTU/h)	480,000	480,000
Cooling Tons	40	40
Efficiency ⁽¹⁾ EER	11.8	11.8
EVAPORATOR FAN		
Transmission	Pulley	Pulley
Number of Fans	1	1
Rated Air Flow ⁽¹⁾ (CFM)	16000	16000
Blower (DxW)	25 x 25	25 x 25
Number of Motors	1	1
Current (A)	23.9	13.4
Power (HP)	10	10
RPM	1800	1800
EVAPORATOR COIL		
Type (Tube / Fin)	Copper / Aluminum	Copper / Aluminum
Rows	4	4
Fins Per Inch	12	12
CONDENSER FAN		
Number of Fans	4	4
Type	Axial	Axial
Number of Motors	4	4
Current (A)	4.3	2.4
Power (W)	1205	1466
RPM	1081	1055
Fan Diameter (mm)	710	710
CONDENSER COIL		
Type (Tube / Fin)	Copper / Aluminum	Copper / Aluminum
Rows	4	4
Fins Per Inch	13	13
COMPRESSOR		
Refrigerant	R410a	R410a
Quantity	4	4
Type	Scroll	Scroll
RLA ⁽²⁾	33,6 / 30,1	18,6 / 16,7
LRA ⁽³⁾	225.0	114.0
ELECTRICAL DATA		
V / Ph / Hz	(208-230 / 3 / 60)	(460 / 3 / 60)
Operating Current ⁽¹⁾ (A)	176.0	98.0
Unit Total Amperage ⁽¹⁾ (A)	176.0	98.0
Minimum Circuit Ampacity (A)	184.0	103.0
Max. Overload Protection (A)	218.0	121.0
NET WEIGHT (kg)	2300	2300
GROSS WEIGHT (kg)	2310	2310

Notes: ¹ Data corresponding to a certain operation condition based on the AHRI 210/240 or 360 standard. ² This Rated Load Amps data (RLA) corresponds to a single compressor. ³ This Locked Rotor Amps data (LRA) corresponds to a single compressor. ⁴ The information provided in the table can change without prior notice.

Blower Performance Data

Model A25-25H	Flow 16000 cfm	Pressure 2.00 in-wg	Temperature 70 °F	Altitude 0 ft	Density 0.075 lb/ft ³	Q Derate 0 cfm	P Derate 0.00 in-wg	Vav Set Point 0.00 in-wg
Fan Tag	Flow 16000 cfm	Pressure 2.00 in-wg	Power 8.64 hp	Static Efficiency 58.4 %	Total Efficiency 68.7 %	Speed 547 rpm	Outlet Velocity 2385 fpm	Efficiency Rating FEG75
	Impeller Dia 25.0 in	Outlet Area 6.71 ft ²	Max. Speed 790 rpm	AMCA Class 9	Drive Belt Drive	Blades 37	P Volume 46.93 ft ³	TurnDown 100 %



Sound(Lwi/Lwo)	63	125	250	500	1000	2000	4000	8000	Lw	LwA
	88/88	88/90	89/90	87/88	86/85	84/84	82/79	75/73	95/96	91/91

Notes: Airflow performance data are obtained in accordance with AMCA 210-07. Installed performance will vary depending on extent of cabinet geometry

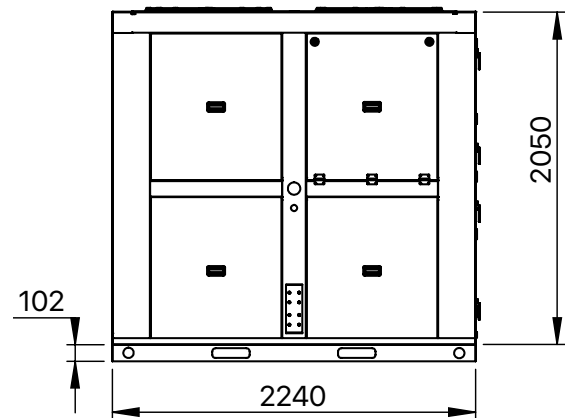
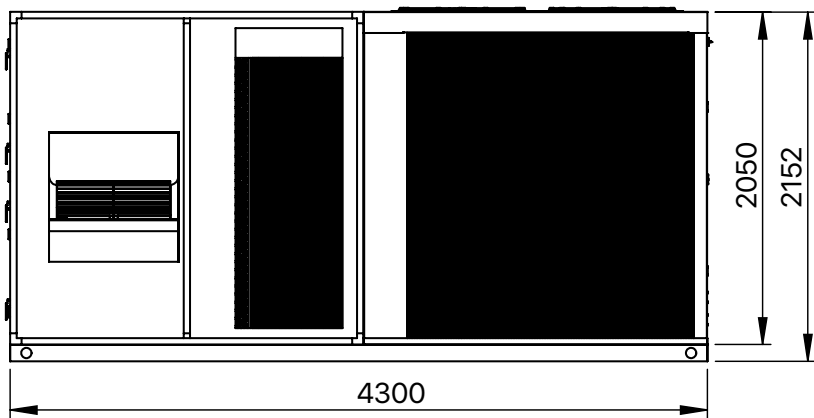
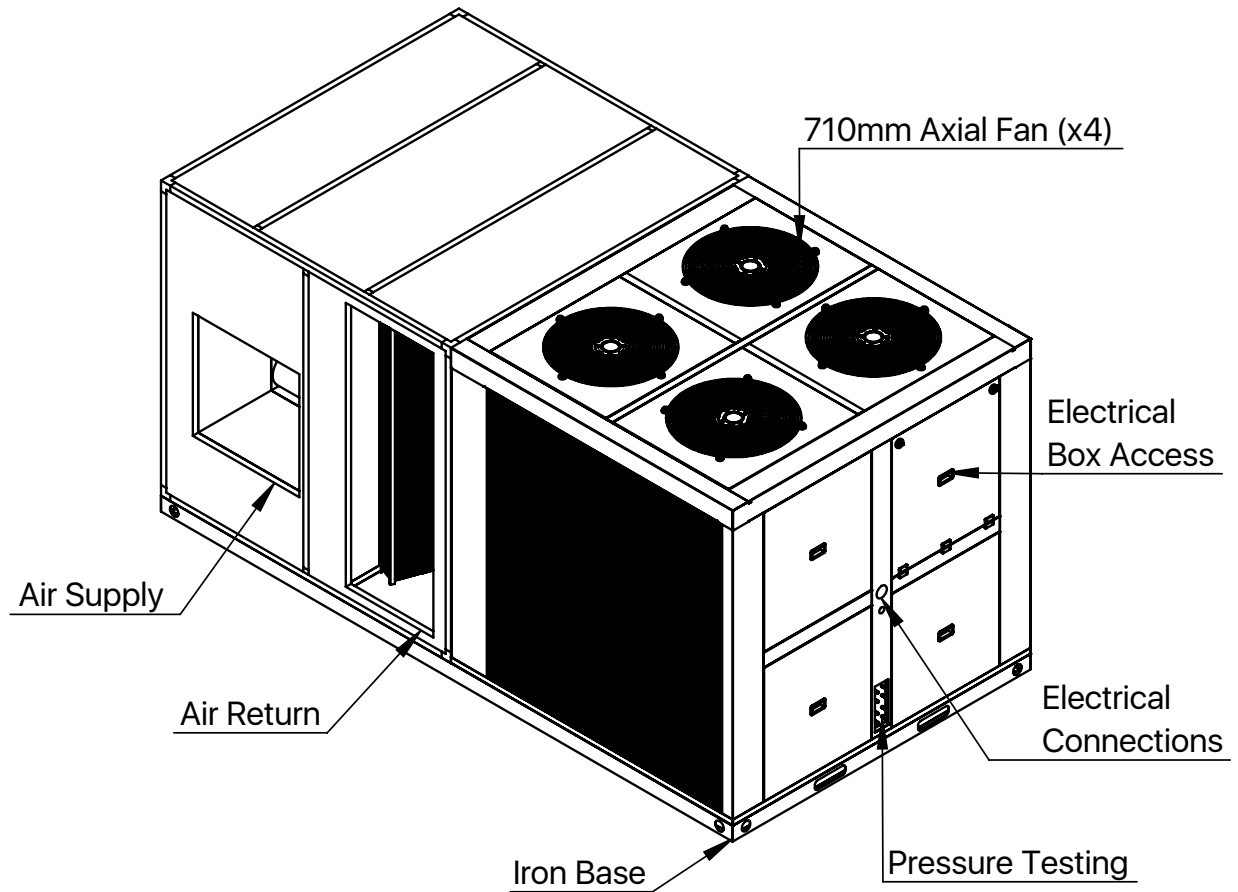
Sound data are estimated from industry experience for the type of product selected. Data should be used for comparison purposes only and do not represent installed values.

System Performance Data

Airflow (CFM)	Ent-DB (°F)	Ambient Temperature (°F)																			
		85						95						105							
		61		67		73		61		67		73		61		67		73			
MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	
9600	75	240	240	19	418	226	33	33	394	213	36	524	185	212	21	370	200	37	487	172	49
	80	288	288	23	418	276	33	33	394	260	36	524	232	256	26	370	244	37	487	216	49
	85	337	337	27	418	326	33	33	394	308	36	524	280	299	30	370	290	37	487	260	49
	90	386	386	31	421	377	34	34	397	356	36	524	327	342	34	373	335	37	487	304	49
	75	301	301	24	515	281	41	41	486	265	44	637	223	267	27	457	249	46	592	207	59
12800	80	363	363	29	515	346	41	41	486	326	44	642	286	321	32	457	306	46	592	266	60
	85	424	424	34	515	385	41	41	486	363	44	637	345	376	38	457	341	46	592	321	59
	90	487	487	39	515	459	41	41	486	433	44	638	407	431	43	457	407	46	593	379	59
	75	357	357	29	510	295	41	41	481	278	44	747	261	317	37	452	261	45	695	243	69
	80	430	430	34	510	374	41	41	481	353	44	747	332	382	38	452	332	45	695	309	69
16000	85	470	470	38	519	456	42	42	490	430	45	747	408	416	42	461	404	46	695	379	69
	90	543	543	43	557	548	45	45	525	517	48	747	480	481	48	494	486	49	695	446	69
	75	409	409	33	572	335	46	46	540	316	49	833	290	363	36	508	297	51	775	270	77
	80	494	494	40	572	427	46	46	540	403	49	833	376	438	44	508	379	51	775	350	77
	85	536	536	43	584	523	47	47	551	493	50	833	462	476	48	518	463	52	775	430	77
22400	90	620	620	50	623	623	50	50	588	588	53	833	548	550	55	553	553	55	775	510	77
	75	457	457	37	624	371	50	50	589	350	54	916	318	405	41	554	329	55	852	296	85
	80	505	505	40	629	477	50	50	593	450	54	916	416	447	45	557	423	56	852	387	85
	85	598	598	48	642	586	51	51	606	553	55	916	514	530	53	570	520	57	852	478	85
	90	692	692	58	696	696	56	56	657	657	60	917	612	614	61	618	618	62	853	569	85
Airflow (CFM)	Ent-DB (°F)	Ambient Temperature (°F)																			
		115						120						125							
		61		67		73		61		67		73		61		67		73			
MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	MBh	SHC	Pi(KW)	
9600	75	200	200	22	348	188	39	39	327	179	41	421	172	184	25	308	170	44	392	167	56
	80	240	240	27	348	230	39	39	327	218	41	421	216	221	30	308	207	44	392	209	56
	85	281	281	31	348	272	39	39	327	259	41	421	260	259	35	308	246	44	392	252	56
	90	322	322	36	351	315	39	39	330	299	41	421	304	296	41	310	284	44	392	295	56
	75	251	251	28	429	234	48	48	404	222	50	512	207	231	32	379	211	54	477	201	68
12800	80	302	302	34	429	288	48	48	404	274	50	516	266	278	38	379	260	54	480	258	69
	85	353	353	39	429	321	48	48	404	305	50	512	321	326	45	379	289	54	477	311	68
	90	406	406	45	429	383	48	48	404	363	50	513	378	374	51	379	345	54	477	367	68
	75	298	298	33	425	246	47	47	400	233	50	601	243	274	38	376	222	54	559	235	80
	80	359	359	40	425	312	47	47	400	296	50	601	308	331	45	376	281	54	559	299	80
16000	85	391	391	43	433	380	48	48	407	361	51	601	379	361	49	383	343	55	559	368	80
	90	452	452	50	464	457	52	52	436	434	55	601	446	417	57	410	412	59	559	433	80
	75	341	341	38	477	279	53	53	449	265	56	670	269	314	43	422	252	60	623	261	89
	80	412	412	46	477	356	53	53	449	338	56	670	349	364	52	422	321	60	623	339	89
	85	447	447	50	487	436	54	54	458	414	57	670	429	395	412	56	430	393	61	623	416
22400	90	517	517	57	520	520	58	58	488	494	61	670	509	476	65	459	469	66	623	494	89
	75	381	381	42	520	309	58	58	488	294	61	737	295	351	48	460	279	66	685	287	98
	80	421	421	47	524	398	58	58	493	378	62	737	387	388	53	463	359	66	685	375	98
	85	498	498	55	535	489	59	59	503	464	63	737	478	459	63	473	441	68	685	463	98
	90	577	577	64	581	581	65	65	546	551	68	738	569	532	73	513	524	73	686	552	98

Notes: ¹ Data corresponding to a certain condition. The capacities described do not take into account the heat generated by the indoor fan.
² MBh = Total Gross Capacity. ³ SHC = Sensible Heat Capacity.

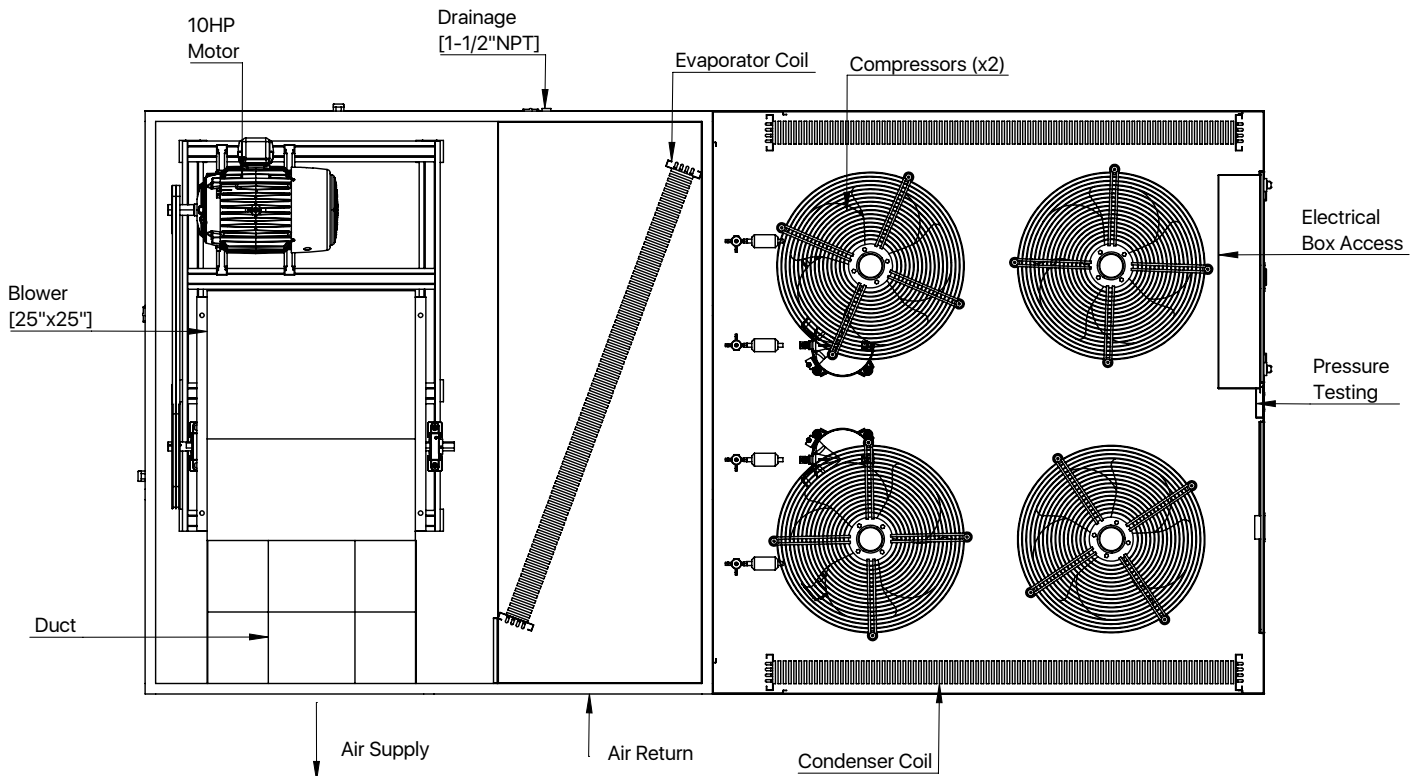
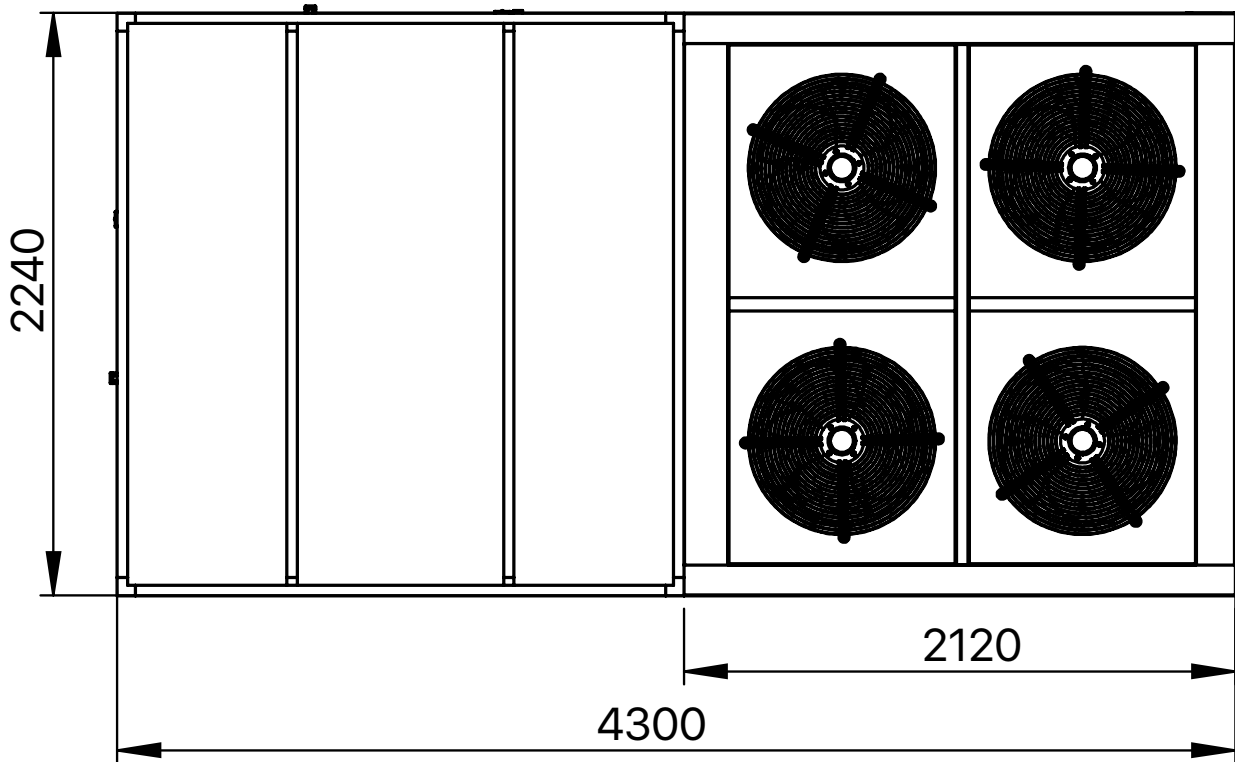
Unit Dimensions



Note: All measurements are in millimeters (mm).

Unit Dimensions

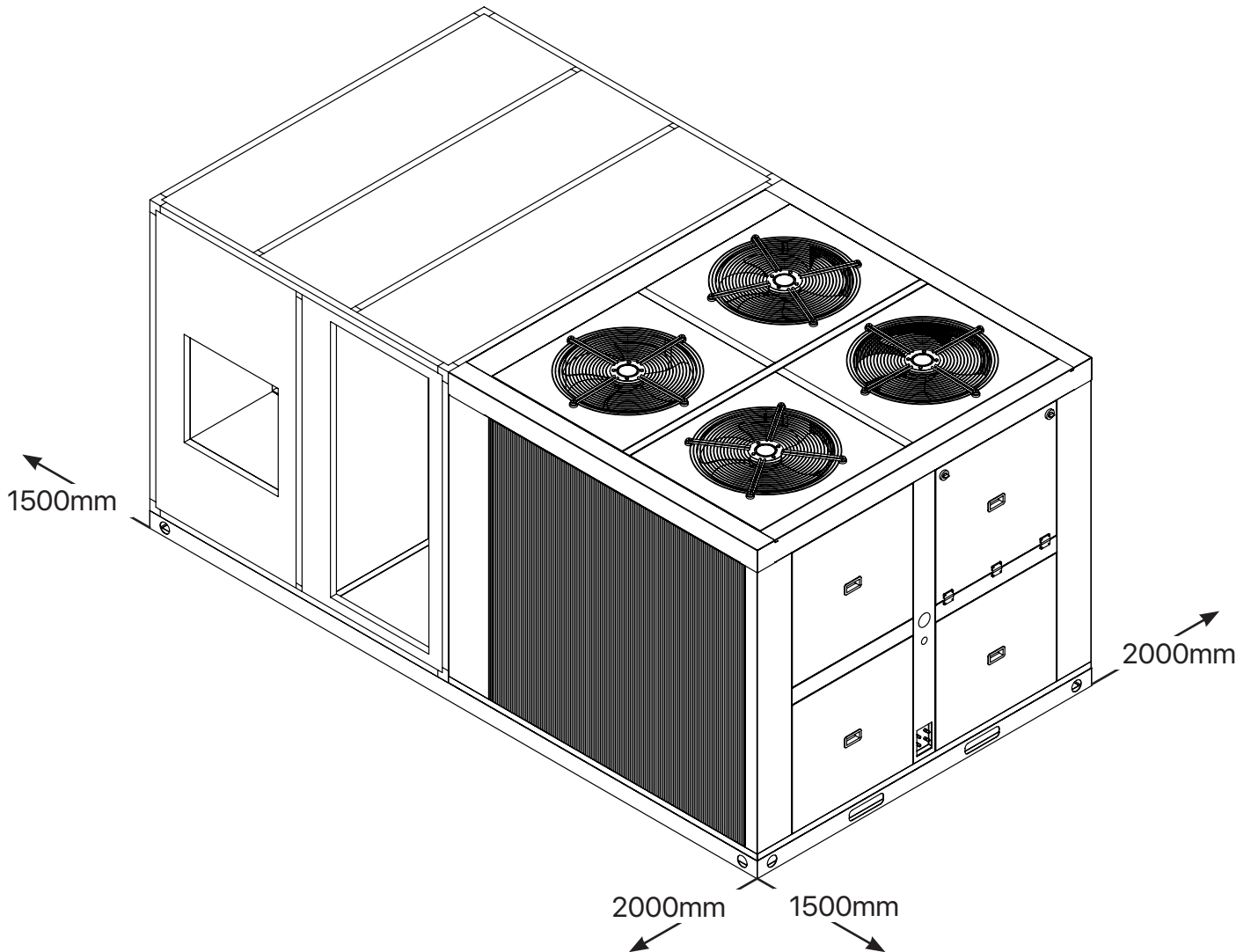
TOP VIEW



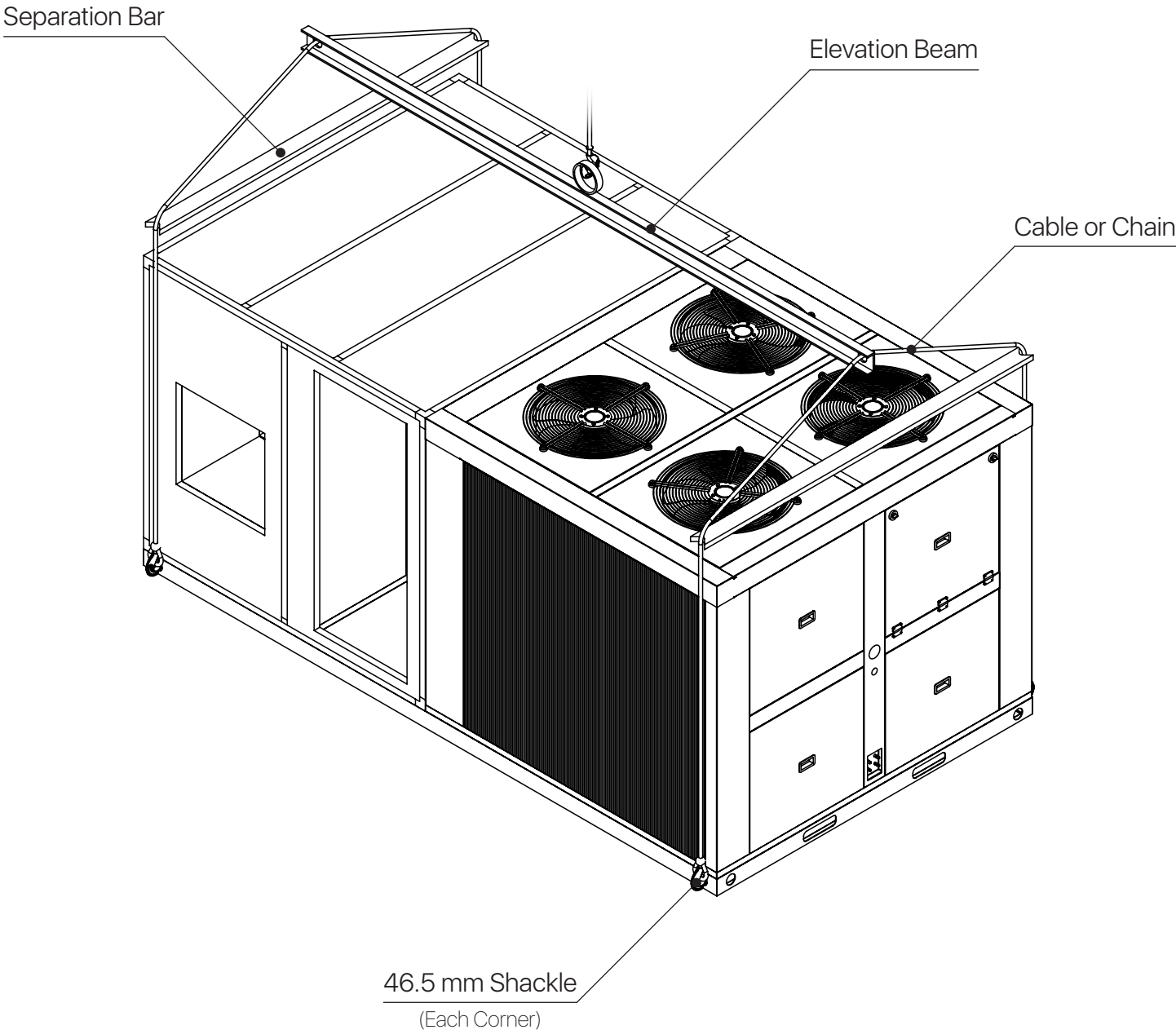
Note: All measurements are in millimeters (mm).

Safety Distance

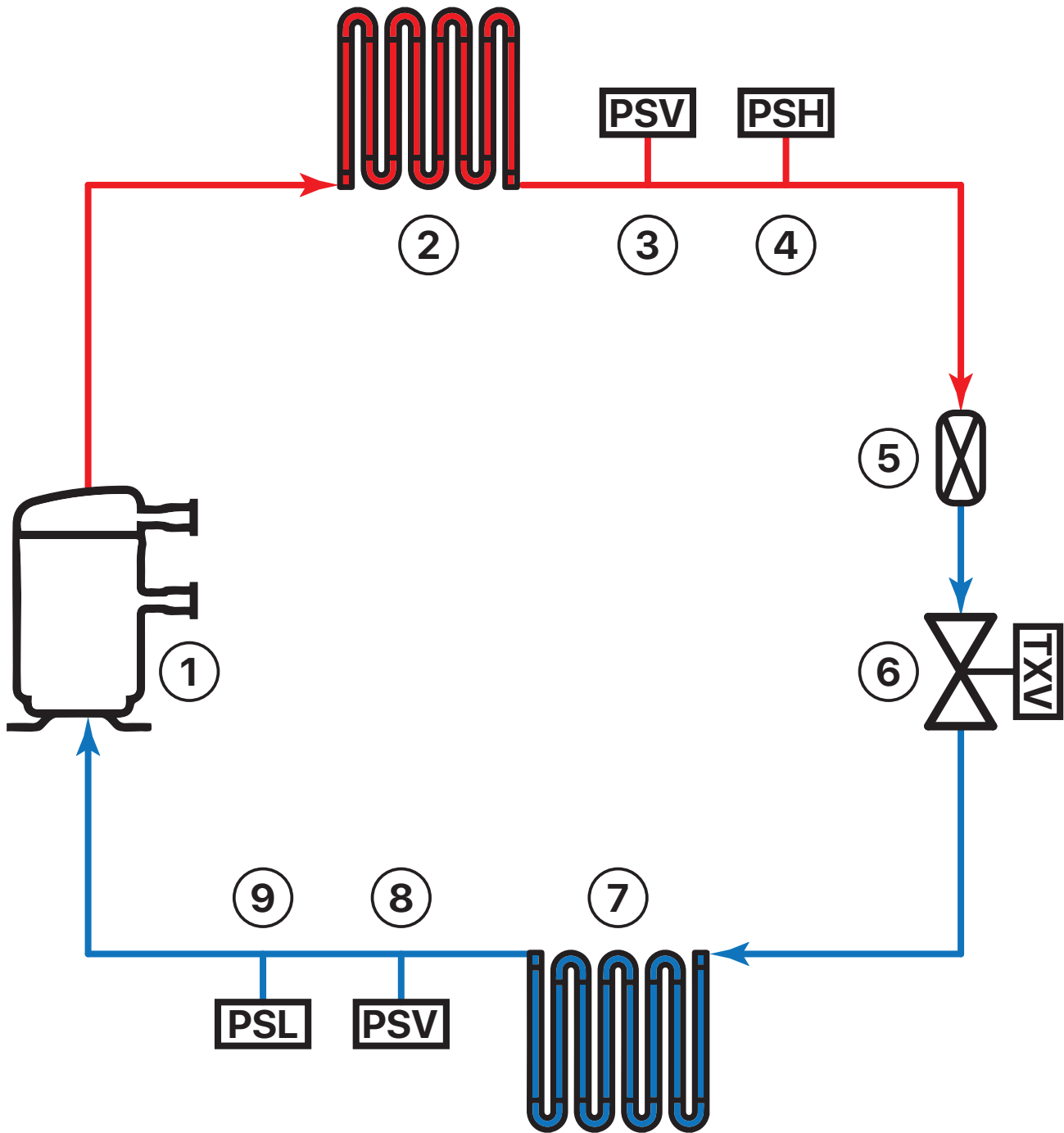
The following minimum free spaces must be observed for the proper performance and capacity of the unit.



Safe Handling



Refrigeration Diagram



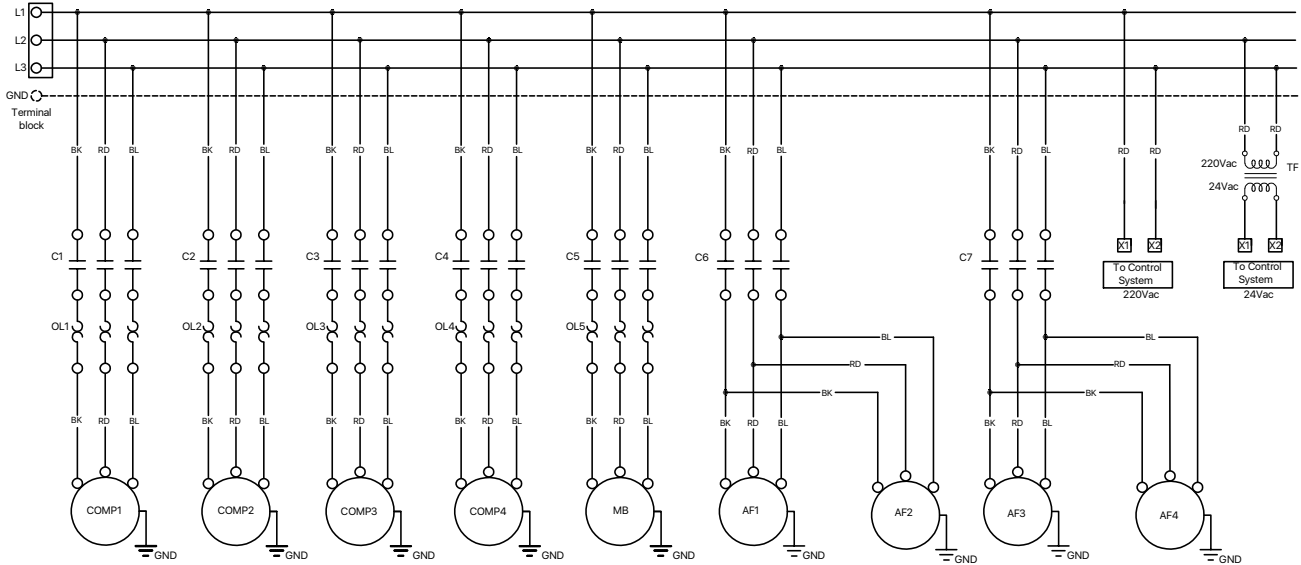
REF.	DESCRIPTION
1	SCROLL COMPRESSOR
2	CONDENSER COIL AND AXIAL FAN
3	ACCESS VALVE FOR PRELOAD AND CONTROL
4	HIGH PRESSURE SWITCH
5	FILTER DRYER

REF.	DESCRIPTION
6	EXPANSION VALVE (TXV)
7	EVAPORATOR COIL AND BLOWER FAN
8	ACCESS VALVE FOR PRELOAD AND CONTROL
9	LOW PRESSURE SWITCH

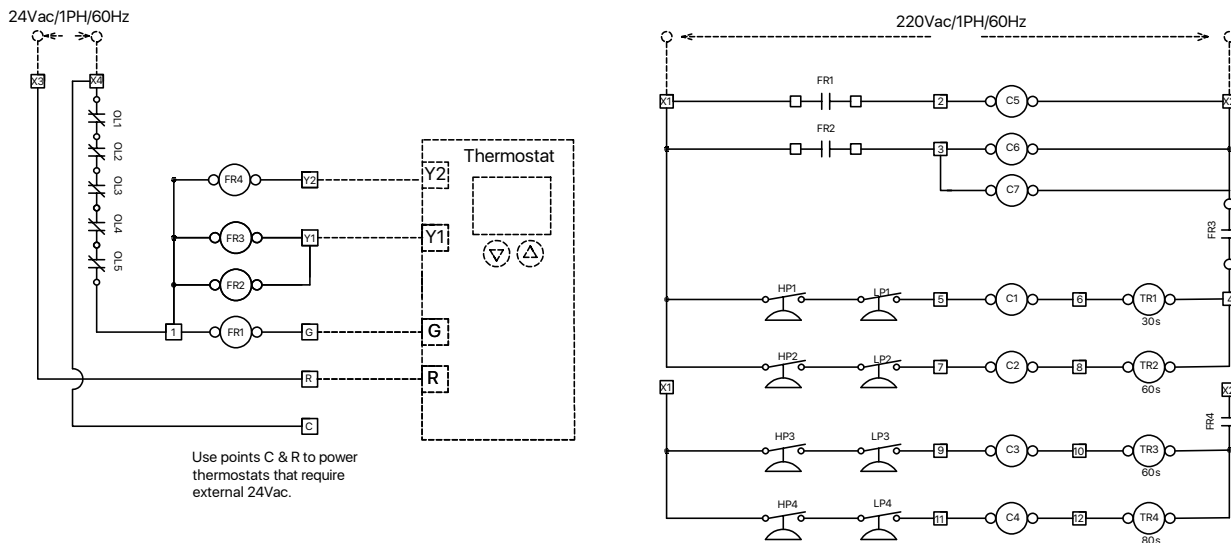
Electric Diagram

While performing the electrical installation, the authorized technician must verify that they are complying with the electrical circuit of the equipment shown below:

208-230V / 3PH / 60Hz (POWER)



(CONTROL)



Use points C & R to power thermostats that require external 24Vac.

WARNING

High Voltage: Disconnect all supply source before manipulating this unit. Multiple energy sources can be present. Not doing so can cause property damage, personal injury or death.

Elements:

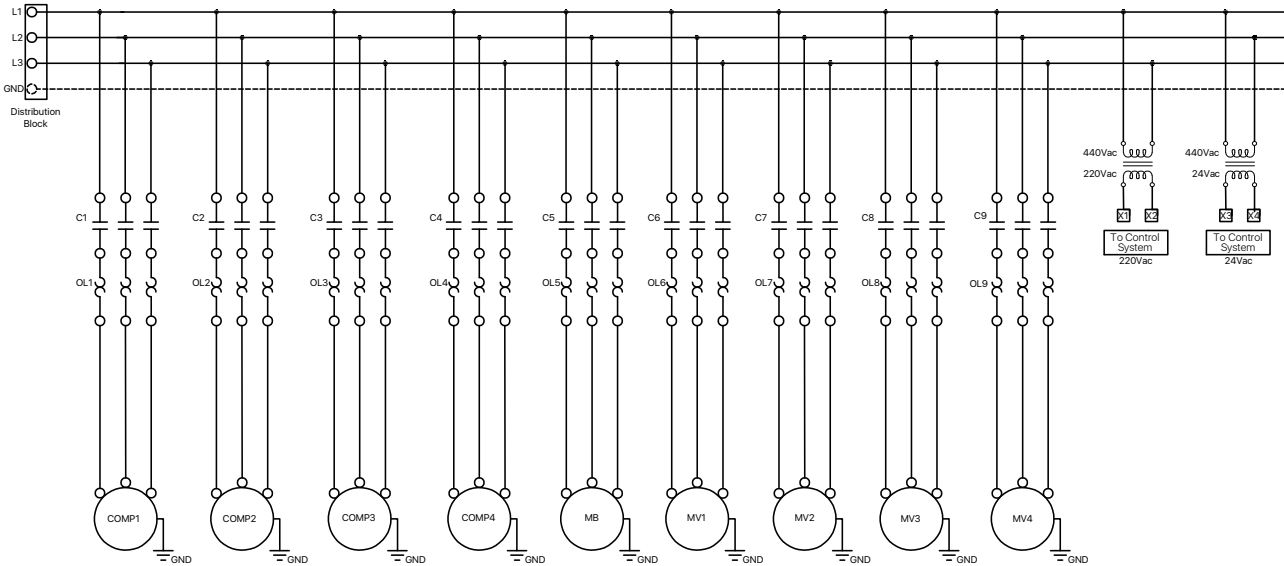
- COMP: Compressor
- MB: Blower Motor
- MV: Condenser Motor
- L: AC Supply Lines
- FR: Auxiliary Relay
- G: Fan Signal
- Y1: Condenser Signal Stage 1
- Y2: Condenser Signal Stage 2
- R: Common 24Vac Lines
- C: Auxiliary 24Vac Lines

- HP: High Pressure Switch
- LP: Low Pressure Switch
- TR: Timer
- C1-C9: Contactor
- OL: Thermal Relay
- GND: Ground
- : Factory Wiring
- - -: Field Wiring

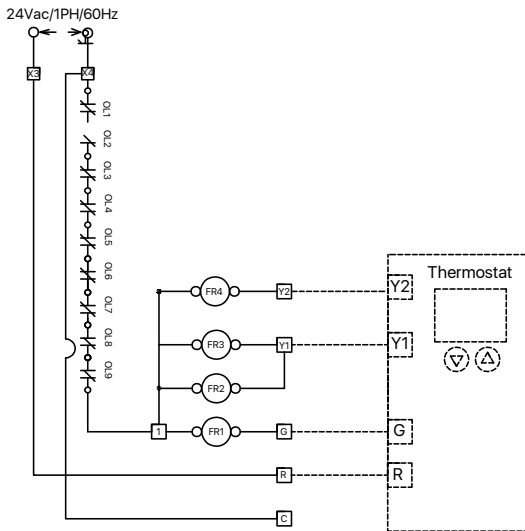
Electric Diagram

While performing the electrical installation, the authorized technician must verify that they are complying with the electrical circuit of the equipment shown below:

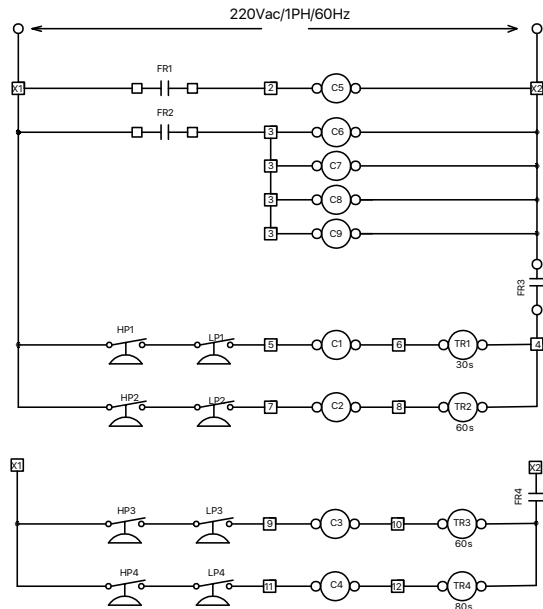
460V / 3PH / 60Hz (POWER)



(CONTROL)



Use points C & R to power thermostats that require external 24Vac power.



WARNING

High Voltage: Disconnect all supply source before manipulating this unit. Multiple energy sources can be present. Not doing so can cause property damage, personal injury or death.

Elements:

- COMP: Compressor
- MB: Blower Motor
- MV: Condenser Motor
- L: AC Supply Lines
- FR: Auxiliary Relay
- G: Fan Signal
- Y1: Condenser Signal Stage 1
- Y2: Condenser Signal Stage 2
- R: Common 24Vac Lines
- C: Auxiliary 24Vac Lines

- HP: High Pressure Switch
- LP: Low Pressure Switch
- TR: Timer
- C1-C9: Contactor
- OL: Thermal Relay
- GND: Ground
- : Factory Wiring
- - -: Field Wiring

Suggestions for Installation

The conditions that must be taken into account in general before installing the equipment:

The works on the units must be carried out only by professionals. Do not connect the power supply until all the work is finished.

Considerations to take into account

1. It is very important in direct transmission equipment that air outlets are not linked in the same duct before a minimum distance of 1.5 meters and preferably at a distance of 2 meters.
2. Make sure the suspension support is strong enough to support the weight of the unit.
3. Most of the equipment weight is located in the refrigerant condensation zone, take into account for the installation of the base where the equipment will rest.
4. Select a place for an easy drainage connection. It is important to install a drainage trap.
5. Be sure to install the equipment level to ensure proper operation of the unit.
6. Select a place far from gases or explosive or combustible materials.
7. Preview the necessary free spaces for maintenance and technical assistance services.
8. Verify that the model, options and tension, indicated in the characteristics plate are correct.
9. Verify that the energy supply meets the specifications that appear on the equipment plate.
10. All field wiring must be carried out by duly qualified personnel. The wiring must be adjusted to the applicable local regulations.
11. Siga los requerimientos apropiados que establecen el código eléctrico nacional sobre las conexiones a masa.
12. Follow the appropriate requirements that establish the National Electric Code on mass connections.
13. Visually inspect the exterior of the unit, including the ceiling, to detect possible signs of damage during transport.
14. Perform a visual verification of the internal components to identify whether there is transport damage, as soon as possible, after the reception of the unit.
15. Avoid obstructions in the supply and return of air so the inner air will circulate properly.

Suggestions for Ignition

Briefly, the steps for the ignition and commissioning of the equipment are as follows (only an authorized technician can do it):

Never do work without the help of professionals. Before making any connection, be sure not to have connected or energized the equipment or sources of equipment until all the work is finished.

Steps for ignition of the unit

1. From the breaker box, take electric power to the equipment. Verify that the capacity of the disjunct is the required to protect the equipment.
2. Connect lines to the power beams, indicated as L1 and L2 of the electric box or L1, L2 and L3 for three-phase equipment.
3. Confirm that the ground connection is reliable and that the ground cable is connected to the special device of the building. Never connect the ground cable with gas, water, telephone cables, etc.
4. From the equipment, wire the three control lines R, G, Y & O*, indicated in the electric box to the respective thermostat terminals.
5. The operation of the air conditioning system is controlled by the interior thermostat. You must adjust the thermostat to a set temperature (set point) to keep the interior temperature at the level you select.
6. The frequent thermostat movement produces faster cycles, which is potentially harmful to the compressor. For no reason move the thermostat temperature selector for at least 5 minutes after the compressor has turned off.
7. Ensure that all connections are correctly made, subject and according to the electrical diagrams provided.
8. Action switches (installed in the field) to energize the equipment.
9. Supply sufficient electrical capacity and respect the electrical cable section necessary for specified consumption.

Maintenance Recommendations

With due maintenance and care, the air conditioning unit will work successfully. Before maintaining, consider the following security precautions:

WARNING!

To prevent damage to the equipment and personal injury or death, disconnect all electricity supply to the equipment before removing access panels to perform some maintenance work. Disconnect electricity to the interior and exterior units.

NOTE: It is possible that there is more than one electric disconnection switch.

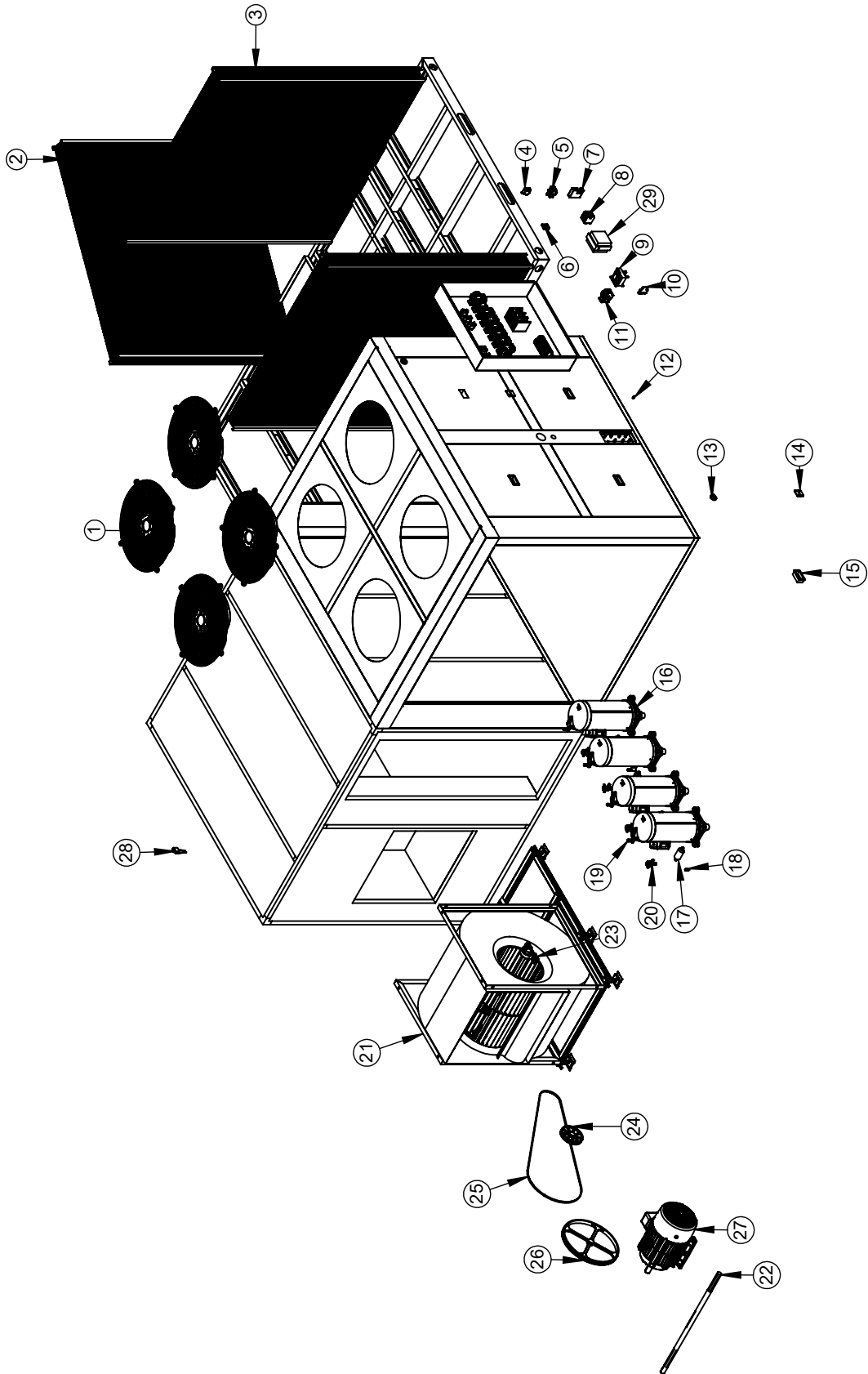
WARNING!

Although special care has been taken to minimize acute edges in the construction of your equipment, be extremely careful when handling the pieces or putting your hand inside it.

Recommendations

1. Clean the air filter carefully, this in order to avoid a restricted air flow, which decreases the efficiency of the unit and its useful life.
2. Check the status of the evaporator coil. It is ideal that there is no obstruction, in order to guarantee the free flow of the coil.
3. In case it is necessary to clean the coil, you can do it with a detergent solution and rinse it with water. This may require coil extraction. Be careful not to fold or damage the fins.
4. Do not allow waste to accumulate around the unit or above it.
5. Periodically inspect the equipment power. Make sure to have the necessary power for the operation of this. The current of the main components of the system must be monitored according to the equipment plate.
6. Periodically inspect work pressures in the system (high and low pressure). They should not exceed their operation rank in normal use conditions.
7. It is recommended to verify parameters such as overheating and refrigerant overcooling. Which under normal conditions of use will have values between 8 and 15 ° F for overheating, and values between 5 and 15 ° F in overcooling.
8. Periodically review the condenser fan status to avoid dirt or friction between sheets that can unbalance the fans.
9. Periodically review that there is no obstruction in the equipment drainage to avoid overflowing water from the equipment.

Exploded View



Parts List - GXPk480DG4AB

REF.	PART NAME	QTY.	PART NUMBER
1	710MM DIAMETER AXIAL FAN	4	10039017
2	40TR EVAPORATOR HEAT EXCHANGER	1	1EA1204-68072X
3	20TR RIGHT CONDENSER HEAT EXCHANGER	1	1CA1304-78070C
3.1	20TR LEFT CONDENSER HEAT EXCHANGER	1	1CA1304-78070B
4	RELAY 8 PINS 24 VAC	4	12010017
4.1	RELAY BASE	4	12010009
5	BIMETALLIC 4 - 6.3 AMP	4	13031074
5.1	BIMETALLIC 22 - 32 AMP	1	13031085
5.2	BIMETALLIC 25 - 40 AMP	4	13031067
6	TIMER	4	16010001
7	DISTRIBUTION BLOCK	4	13110015
8	POWER TERMINAL	3	13110008
9	TRANSFORMER 220V TO 24V 75VA	1	15110013
10	CONTROL TERMINAL	40	13110010
11	CONTACTOR 9A-3P-220V	4	13030056
11.1	CONTACTOR 38A-3P-220V	1	13030059-1
11.2	CONTACTOR 50A-3P-220V	4	13030051
12	ACCESS VALVE 1/4"	8	16C056002
12.1	ACCESS VALVE 1/4"X0.032"X2" WITH NUT	8	16C056001
13	1/4 METAL CLOSURE	2	59040003
14	HINGE	8	59040014
15	LARGE BUILT-IN HANDLE	8	59040001
16	COPELAND 9.41TR SCROLL TYPE COMPRESSOR	4	14021187
17	5/8" FILTER DRYER	4	23010009
18	HIGH PRESSURE SWITCH R410 610-420	4	31020016
19	LOW PRESSURE SWITCH R410 55-95	4	31020017
20	EXPANSION VALVE 10TR R410	4	31040034
21	CENTRIFUGAL FAN 25"X25"X1-1/2	1	20010061
22	AISI 4140 STEEL SHAFT 1-1/2" X 110CM	1	73210089
23	1-1/2" BEARING	2	53020017
24	DRIVING PULLEY QD 2B68 SDS	1	53036015
24.1	SDSX 1 5/8 DRIVING PULLEY BUSHING	1	53032006
25	PULLEY DRIVE BELT	1	53040092
26	DRIVEN PULLEY QD 2BK184 SK	1	53031214
26.1	SK X 1 1/2" DRIVEN PULLEY BUSHING	2	53032012
27	10HP THREE-PHASE MOTOR	1	10060005-1
28	NYLO N HANDLE	8	51110010

Parts List - GXPK480DG7AB

REF.	PART NAME	QTY.	PART NUMBER
1	AXIAL FAN WITH 710MM DIAMETER	4	10039017
2	40TR EVAPORATOR HEAT EXCHANGER	1	1EA1204-68072X
3	20TR RIGHT CONDENSER HEAT EXCHANGER	1	1CA1304-78070C
3.1	20TR LEFT CONDENSER HEAT EXCHANGER	1	1CA1304-78070B
4	8-PIN 24VAC RELAY	4	12010017
4.1	RELAY BASE	4	12010009
5	1.8 - 2.8 AMP THERMAL RELAY	4	13031090
5.1	11 - 17 AMP THERMAL RELAY	1	13031086
5.2	15 - 23 AMP THERMAL RELAY	4	13031071
6	TIMER	4	16010001
7	DISTRIBUTION BLOCK	4	13110015
8	POWER TERMINAL	3	13110008
9	440V TO 24V 75VA TRANSFORMER	1	15110013
10	CONTROL TERMINAL	40	13110010
11	9A-3P-220V CONTACTOR	4	13030056
11.1	18A-3P-220V CONTACTOR	1	13030052
11.2	32A-3P-220V CONTACTOR	4	13030058
12	1/4" X 0.032" X 2" ACCESS VALVE	8	16C056002
12.1	1/4" X 0.032" X 2" ACCESS VALVE WITH NUT	8	16C056001
13	1/4" METAL CLOSURE	2	59040003
14	HINGE	8	59040014
15	LARGE RECESSED HANDLE	8	59040001
16	9.41TR SCROLL TYPE COPELAND COMPRESSOR	4	14021187
17	5/8" DRYER FILTER	4	23010009
18	R410 HIGH PRESSURE SWITCH 610-420	4	31020016
19	R410 LOW PRESSURE SWITCH 55-95	4	31020017
20	10TR R410 EXPANSION VALVE	4	31040034
21	25" X 25" X 1-1/2" CHINESE HOUSING CENTRIFUGAL FAN	1	20010061
22	1-1/2" AISI 4140 STEEL SHAFT X 110CM	1	73210089
23	1-1/2" PILLOW BLOCK	2	53020017
24	QD 2B68 SDS DRIVE PULLEY	1	53036015
24.1	SDSX 1 5/8 DRIVE PULLEY BUSHING	1	53032006
25	DRIVE BELT PULLEY TRANSMISSION	1	53040092
26	QD 2BK184 SK DRIVEN PULLEY	1	53031214
26.1	SK X 1 1/2" DRIVEN PULLEY BUSHING	2	53032012
27	10HP THREE-PHASE MOTOR	1	10060005-1
28	NYLON HANDLE	8	51110010
29	440V TO 220V 100VA TRANSFORMER	1	15110007

Notes

Lined area for notes, consisting of 20 horizontal lines.

Notes



In accordance with its continuous progress policy and product improvement, Goodman reserves the right to make changes without prior notice.