United States Patent and Trademark Office (USPTO)
Office Action (Official Letter) About Expungement and/or Reexamination Proceeding

Proceeding No. 2022-100137E

U.S. Registration No. 5376467

Mark: SMART LOCK

Correspondence Address:
SUL LEE
SUL LEE LAW FIRM, PLLC
3030 LYNDON B JOHNSON FWY, STE 220
DALLAS TX 75234
UNITED STATES

Registrant: Locus Link USA

Reference/Docket No. N/A

Correspondence Email Address: sul@sulleelaw.com

REQUEST FOR RECONSIDERATION AFTER FINAL ACTION DENIED

Issue date: August 2, 2023

Registrant's request for reconsideration is denied. *See* 37 C.F.R. §§2.63(b)(3), 2.93(c)(1)(i). The examiner has carefully reviewed registrant's request, and determined that it did not resolve all outstanding issues.

The following requirement is maintained and continued:

- Acceptable use of the mark in commerce for the goods in the registration as of the relevant date, which in this case is the filing date of the petition for expungement.

Registrant has not shown use of the mark in commerce as of the relevant date with the goods at issue, namely:

Class 11

- Components for air conditioning and cooling systems, namely, evaporative air coolers

In its request for reconsideration, registrant provides evidence it claims supports use of the mark on a range of components used in and in tandem with evaporative air cooler units (Exhibit 2). Registrant

alleges that the goods can be used with evaporative air coolers to facilitate the flow of air. (Declaration of Brian Kim ¶6.)

While registrant provides evidence that it claims support that these goods can be used, inter alia, to connect pipes in evaporative air coolers, as noted in the final February 2, 2023 Office action, the goods for which the mark is registered, and the identification selected from the *Acceptable Identification of Goods and Services Manual* (USPTO ID Manual), are evaporative air coolers. And, none of the evidence supports use of the mark with the registered goods. In fact, registrant admits it did not intend to apply for evaporative air coolers and that its goods are components and not evaporative air coolers.(Declaration of Brian Kim ¶¶ 9 and 10, December 27, 2022 response).

Registrant argues that the identification of goods should be read to include **components for evaporative air coolers** as standalone goods**.** This argument is counter to longstanding identification of goods and services policies and practices. In identifications of goods and services that include "namely,"

> the goods or services listed after "namely," "in the nature of," or the like must further define the introductory wording that precedes "namely," "in the nature of," or the like using definite terms within the scope of the introductory wording.

Trademark Manual of Examining Procedure (TMEP) §1401.02(a). Therefore, "evaporative air coolers" are the registered goods that define the introductory wording that precedes "namely." A review of the records of the USPTO for trademark registrations that incorporate the identification chosen by registrant, "components for air conditioning and cooling systems, namely, evaporative air coolers", located 97 live registrations. (Exhibit A). Looking at the registrations and the specimens submitted to support the goods covered by the registrations, it is clear that the goods in the vast majority of the registrations are evaporative air coolers as the specimens clearly show a cooling or heating device. (Exhibit B, a representative sample of the registrations incorporating the identification with a copy of the specimens).

Even if the identification could be read as registrant suggests, which it cannot for the above reasons, the components shown in the evidence submitted with the response are not goods that would even fall within the scope of wording in the registered identification of goods. Specifically, components covered by the language of this identification, as discussed in the final Office action, are those that would assist in heating or cooling. So, even if the identification could be read as "components for evaporative air coolers," for that assertion to be adopted, the components also would have to fall within the class of the goods selected by registrant. However, registrant's goods are used to connect pipes and facilitate air flow. They do not cool or heat as required by goods in International Class 11. TMEP §1401.02(a).

Section 7(b) of the Lanham Act provides that a federal trademark registration on the Principal Register "shall be prima facie evidence ... of the [registrant's] exclusive right to use the registered mark in commerce on or in connection with the goods or services specified in the certificate ...." 15 U.S.C. § 1057(b) (emphasis added). In other words, the legal rights and benefits that accrue from registration are based on the goods or services as listed in the registration. That is why, as the Supreme Court has recognized, "[t]he usages *11 listed in [an] application ... are critical." *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 135 S. Ct. 1293, 1300 (2015).

The importance of an accurate identification of goods and services exists throughout the lifecycle of a trademark registration - from examination of an application through to maintenance of a registration.

Section 1(a) of the Lanham Act requires that an application to register a trademark must include "specification of ... the goods in connection with which the mark is used ...." 15 U.S.C. § 1051(a). "It is within the discretion of the [US]PTO to require that one's goods be identified with particularity." *In re Omega SA*, 494 F.3d 1362, 1365 (Fed. Cir. 2007) (quoting *In re Water Gremlin Co.*, 635 F.2d 841, 845 (CCPA 1980)). As to issued registrations, if the evidence of use of the mark is inconsistent with the goods specified in the registration, the mark is not in use for the registered goods and the registration may be terminated under Section 16(a). 15 U.S.C. §1066(a).

Because no acceptable use of the mark for the goods in the registration has been submitted, the request for reconsideration is **denied.**

If registrant filed a notice of appeal with the Trademark Trial and Appeal Board, the Board will be notified to resume the appeal proceeding. Otherwise, a Notice of Termination will issue, and the registration will be cancelled in whole or in part as determined by the scope of the goods and/or services involved in the proceeding.

/Dawn-Marie Sanok/
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INDEX

Exhibit A	Results of Trademark Electronic Search System (TESS) search of live registrations that have the identification of goods “Components for air conditioning and cooling systems, namely, evaporative air coolers”
Exhibit B	Representative sample of registrations found in Exhibit A with copies of the specimen(s) submitted with the application or maintenance document

EXHIBIT A

TESS was last updated on Wed Aug 2 04:07:22 EDT 2023

Start List At: OR Jump to record: **97 Record(s) found (This page: 1 ~ 97)**

Refine Search "Components for air conditioning and cooling system Submit

Current Search: S5: "Components for air conditioning and cooling systems, namely, evaporative air coolers"[gs] and "registrant"[ow] and live[LD] docs: 97 occ: 295

Export displayed results (1 ~ 97) .csv

	Serial Number	Reg. Number	Word Mark	Check Status	Live/Dead	Class(es)
1	97598092	7107804	NEUKNIY	TSDR	LIVE	
2	97435097	7105495	RV65F	TSDR	LIVE	
3	97397255	7090889	OEMCLIMA	TSDR	LIVE	
4	97309529	7090376	CT MORLEY	TSDR	LIVE	
5	97051492	7069676	OPTIFLOW	TSDR	LIVE	
6	97366787	7061757	LESUDA	TSDR	LIVE	
7	97267243	7005708	PAGLIPAT	TSDR	LIVE	
8	97165656	6948235	MENCAPAI	TSDR	LIVE	
9	97154152	6942069	PONDITNI	TSDR	LIVE	
10	97135316	6930505	NEKPOKKA	TSDR	LIVE	
11	97119965	6923916	ALLVENT	TSDR	LIVE	
12	97118367	6923626	WINTCOMFORT	TSDR	LIVE	
13	97044778	6883948	WAITSCHER	TSDR	LIVE	
14	97101133	6872526	QUIK COMFORT	TSDR	LIVE	
15	90839545	6813062	S&A	TSDR	LIVE	
16	90514483	7117561	COOL-SPACE	TSDR	LIVE	
17	90745039	6752885	KZCUVNV	TSDR	LIVE	
18	90278939	6549127	TPA	TSDR	LIVE	
19	90276102	6549122	TPA	TSDR	LIVE	
20	90317713	6958247	AWECO	TSDR	LIVE	
21	90230903	6886876	COOLSSMANN	TSDR	LIVE	
22	90659456	6862267	DREAMSVILLE	TSDR	LIVE	
23	90888324	6844517	SYTHOUR	TSDR	LIVE	
24	90762856	6785508	C CORUNCLIMA	TSDR	LIVE	
25	90678630	6776493	BHI	TSDR	LIVE	
26	90621356	6665901	ZBRBX ZHIBO	TSDR	LIVE	
27	90501963	6601333	CIRC-AIR	TSDR	LIVE	
28	88149860	5757212	RS	TSDR	LIVE	
29	88149814	5871465	REEVES SUPPLY	TSDR	LIVE	
30	88558121	6041147	KOONIE	TSDR	LIVE	
31	88115118	5831816	JAINA	TSDR	LIVE	
32	88744105	6381383	AURORA AIR CONDITION	TSDR	LIVE	
33	88863428	6179215	ANDOBIL	TSDR	LIVE	

34	88552947	5995747	IKA OMNIS	TSDR	LIVE	011
35	88415538	5914029	COLDMASTER	TSDR	LIVE	007; 011; 017; 019
36	88283622	5828483	MICROHOO	TSDR	LIVE	011
37	88230303	5800001	COMFORPARTS	TSDR	LIVE	011
38	88221030	5787844	H	TSDR	LIVE	011
39	88088240	5738629		TSDR	LIVE	011
40	87977436	5494013	QUILO	TSDR	LIVE	
41	87164187	5231380	NIKAUTO	TSDR	LIVE	
42	87218696	5376467	SMART LOCK	TSDR	LIVE	
43	87218687	5376466	SMARTLOCK	TSDR	LIVE	
44	87653046	5547437	NQG	TSDR	LIVE	
45	87376963	5322990	WIDEWISE	TSDR	LIVE	
46	87572851	6239996	FROST	TSDR	LIVE	
47	87748777	5944800	DIAMONDCLEAR	TSDR	LIVE	011
48	87748727	5932701	HCORE	TSDR	LIVE	011
49	87905657	5922946	AUTO COOLING SOLUTIONS	TSDR	LIVE	011
50	87872170	5921756	JACKSON & CHURCH	TSDR	LIVE	011
51	87872162	5921755	YS	TSDR	LIVE	011
52	87872129	5921754	YS	TSDR	LIVE	011
53	87748792	5908857	IPILOT	TSDR	LIVE	011
54	87768964	5737223	CAJUN KOOLING	TSDR	LIVE	011
55	87872671	5603545	POWER MECHANICAL	TSDR	LIVE	011
56	87847178	5595406	DIAL	TSDR	LIVE	011
57	87244720	5244698	A AOSOM	TSDR	LIVE	011
58	87070043	5424111	SDAAC	TSDR	LIVE	011
59	87466156	5369137	SOLAR CHILL	TSDR	LIVE	011
60	87190730	5371150	RAIREFIED	TSDR	LIVE	011
61	87191359	5356224	VVR	TSDR	LIVE	011
62	87190656	5342234	RAIREFY	TSDR	LIVE	011
63	87180607	5190970	AWAI	TSDR	LIVE	011
64	86932838	5224185	ZURICH	TSDR	LIVE	
65	86425628	4878441	TRAILBLAZER	TSDR	LIVE	
66	86939830	5144799	CCH COOLER&HEATER	TSDR	LIVE	
67	86498012	4891625	L LIFEBASIS	TSDR	LIVE	
68	86394063	4788871	INNOO TECH	TSDR	LIVE	
69	86126998	4728589	SKYLINE	TSDR	LIVE	
70	86126916	4721139	MAVERICK	TSDR	LIVE	
71	86150147	4704969	NORTH STORM	TSDR	LIVE	
72	86127057	4682796	TEMPLIFIER	TSDR	LIVE	
73	86126819	4682795	VISION	TSDR	LIVE	
74	86433666	4798403	GLOBAL AIR	TSDR	LIVE	
75	86096025	4551096	THERMAVANT TECHNOLOGIES	TSDR	LIVE	
76	86006236	4500910	QÜÜL AIR CONDITIONER	TSDR	LIVE	011
77	85043561	4050202	ECO TERRA	TSDR	LIVE	
78	85043633	4050203	OSLO	TSDR	LIVE	
79	85821302	4517035	GEIGER AUTOMOTIVE	TSDR	LIVE	
80	85887871	5243602	ECON	TSDR	LIVE	007; 011
81	79193635	5258267	GREENLANE	TSDR	LIVE	

82	79192838	5258241		TSDR	LIVE	
83	79034189	3405696	FUNKE	TSDR	LIVE	
84	79285991	6696019	BASESYS	TSDR	LIVE	
85	79193619	5144045	CLIMAVENETA	TSDR	LIVE	
86	79248618	5929244	CONDORCHEM ENVITECH SMART IDEAS FOR WASTEWATER & AIR TREATMENT	TSDR	LIVE	011; 040; 042
87	77835996	3861918	YMGI, AIR CONDITONER & HEAT PUMP, ENGINEERED HVAC & R FOR MAXIMUM GREEN WORLD	TSDR	LIVE	
88	77718432	3782577	PATHFINDER	TSDR	LIVE	
89	77966143	3922064	BMIL	TSDR	LIVE	
90	77966181	3922065	BMIL	TSDR	LIVE	
91	77804517	3757563	MARINAIRE	TSDR	LIVE	011
92	77145678	3434286	SHINCO	TSDR	LIVE	
93	77225989	3497891	INDEL B	TSDR	LIVE	
94	77479141	3560339	NWT NEW WIDETECH	TSDR	LIVE	007; 011
95	77429910	3520104	SENSI-COIL	TSDR	LIVE	011
96	77074008	3486976	SWAMPY	TSDR	LIVE	011
97	77087447	3311254	MIGHTYKOOL	TSDR	LIVE	011

Export displayed results (1 ~ 97) CSV

EXHIBIT B

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Mark: MIGHTYKOOL

MightyKool

US Serial Number: 77087447

Application Filing Date: Jan. 21, 2007

US Registration Number: 3311254

Registration Date: Oct. 16, 2007

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Jun. 07, 2017

Publication Date: Jul. 31, 2007

Mark Information

Mark Literal Elements: MIGHTYKOOL

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air conditioners; Air conditioners for vehicles; Components for air conditioning and cooling systems, namely, evaporative air coolers; Evaporative air coolers; Locally induced air-conditioners; Window-mounting air-conditioners

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Oct. 17, 2003

Use in Commerce: Jan. 04, 2004

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU: No

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E: No

Currently 66A: No

Filed 66A: No

Currently No Basis: No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Stich, John L.

DBA, AKA, Formerly: DBA trustee of THE STICH FAMILY TRUST

Composed of: Stich, John L. Stich, Barbara M., all U.S. citizens

Owner Address: 2534 W. Medina Ave
Mesa, ARIZONA UNITED STATES 85202

Legal Entity Type: TRUST

State or Country Where Organized: ARIZONA

Attorney/Correspondence Information

Attorney of Record - None

Correspondent

Correspondent Name/Address: STICH, JOHN L.
2534 W. Medina Ave
MESA, ARIZONA UNITED STATES 85202

Phone: 480-897-1233

Fax: 480-897-9530

Correspondent e-mail: swampy1@swampy.net

Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jun. 07, 2017	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Jun. 07, 2017	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	76985
Jun. 07, 2017	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	76985
Jun. 07, 2017	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	76985
Apr. 11, 2017	TEAS SECTION 8 & 9 RECEIVED	
Oct. 16, 2016	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Nov. 20, 2012	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Nov. 20, 2012	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	68335
Nov. 20, 2012	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	68335
Oct. 26, 2012	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Oct. 26, 2012	TEAS SECTION 8 & 15 RECEIVED	
Oct. 16, 2007	REGISTERED-PRINCIPAL REGISTER	
Jul. 31, 2007	PUBLISHED FOR OPPOSITION	
Jul. 11, 2007	NOTICE OF PUBLICATION	
May 10, 2007	LAW OFFICE PUBLICATION REVIEW COMPLETED	77075
May 10, 2007	ASSIGNED TO LIE	77075
Apr. 23, 2007	APPROVED FOR PUB - PRINCIPAL REGISTER	
Apr. 20, 2007	ASSIGNED TO EXAMINER	76463
Jan. 25, 2007	NOTICE OF PSEUDO MARK MAILED	
Jan. 24, 2007	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE

Date in Location: Jun. 07, 2017

12-Volt *MightyKool*
Instruction Booklet & Warrantee
Model MW1

***Portable Cooling will not typically* cool an entire Vehicle or room. Use like a fan and then enjoy the cooler air.**

Caution: Read A. through E before operating.

A. **Place water in the door on the side and watch water gauge in front to not overfill. Keep the level about half full in a moving vehicle.** (Holds about 1/2 Gallon.)

B. **To utilize the Float read #15 for proper functionality. Be cautious about setting *MightyKool* where it could damage fine furniture much like a cold glass of water.**

C. **Do not re-circulate the MW1 cooled air. Provide fresh air or the cooler will not cool (Why? Read #7 & #8).**

D. **Always store the Cooler Upright until the Filter Pads are dry or they may loose their cooling properties.**

Limited one-year Warrantee:

S & S Manufacturing warrants, for one year from the date of the purchase, any *MightyKool* that does not perform satisfactorily due to defects caused by faulty material or workmanship. Our obligation assumed under this warranty is limited to the repair or replacement of parts, without charge, which are defective and which have not been misused, carelessly handled, or **defaced** by repairs made or attempted by others. Consequential Damages due to this product are not covered. This warranty gives you specific legal rights. You may also have other rights, which vary State to State. The complete product must be returned, transportation prepaid, to S&S Mfg. Phone (480) 897-1233 for the address of you're nearest warrantee service or on the Internet at www.swampy.net 102406.

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Mark: SHINCO

Shinco

US Serial Number: 77145678

Application Filing Date: Apr. 01, 2007

US Registration Number: 3434286

Registration Date: May 27, 2008

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor: LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Jun. 07, 2018

Publication Date: Mar. 11, 2008

Mark Information

Mark Literal Elements: SHINCO

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Related Properties Information

Claimed Ownership of US Registrations: 2213917

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Humidity control device, namely, a portable container containing a moisture-sensitive silica co-polymer that absorbs or releases moisture to maintain relative humidity in a particular range; Electric dehydrators; Clothes drying machines; Ventilating exhaust fans; Air conditioners for vehicles; Air purifiers; Air purifiers; Air filters for air conditioning units; [Ozone sanitizers for air and water; Exhaust hoods for kitchens; Flashlights;] Electric patio heaters; Portable electric heaters; Electric radiant heaters; Hot water heaters; Solar collectors; Solar water heaters; Heat exchangers not being parts of machines; Evaporative air cooling units for domestic use; Air conditioners; Window-mounting air-conditioners; Air conditioning units; [Ceiling fans; Electric fans; Electric heating fans; Electric window fans; Portable electric fans;] Walk-in freezers; Refrigerated dispensing units for beverages; Refrigerated beverage dispensing units; Refrigerated shipping containers; Refrigerating machines; Refrigerators; Components for air conditioning and cooling systems, namely, evaporative air coolers; Evaporative air coolers; Water coolers; [Pipes being parts of sanitary facilities; Regulating accessories for water supply, namely, metered valves; Waste water purification units; Water purification units; Showers; Decorative water fountains;] Air filters for domestic use; Central air-conditioning installations

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Jun. 01, 1998 **Use in Commerce:** Aug. 01, 2004

Basis Information (Case Level)

Filed Use:	Yes	**Currently Use:**	Yes
Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	Yes	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: JIANGSU YOAU ELECTRIC CO., LTD.

Owner Address: WUJIN DISTRICT, CHANGZHOU CITY,
LIJIA VILLAGE, LIJIA TOWN,
JIANGSU PROVINCE CHINA

Legal Entity Type: CORPORATION **State or Country Where Organized:** CHINA

Attorney/Correspondence Information

Attorney of Record

Attorney Name:	Joe McKinney Muncy	**Docket Number:**	ZLG-214
Attorney Primary Email Address:	mailroom@mg-ip.com	**Attorney Email Authorized:**	Yes

Correspondent

Correspondent Name/Address: Joe McKinney Muncy
MUNCY, GEISSLER, OLDS & LOWE, PC
125 S. Royal Street
Alexandria, VIRGINIA UNITED STATES 22314

Phone:	703-621-7140	**Fax:**	703-621-7155
Correspondent e-mail:	mailroom@mg-ip.com	**Correspondent e-mail Authorized:**	Yes

Domestic Representative

** Domestic Representative Name:**	Max Vern	**Phone:**	(212) 336-8000
Fax:	(212) 336-8001		
** Domestic Representative e-mail:**	ptodocket@arelaw.com	** Domestic Representative e-mail Authorized:**	Yes

Prosecution History

Date	Description	Proceeding Number
Dec. 23, 2022	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Dec. 23, 2022	TEAS CHANGE OF DOMESTIC REPRESENTATIVES ADDRESS	
Dec. 23, 2022	ATTORNEY/DOM.REP.REVOKED AND/OR APPOINTED	
Dec. 23, 2022	TEAS REVOKE/APP/CHANGE ADDR OF ATTY/DOM REP RECEIVED	
Sep. 22, 2021	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
Jul. 24, 2018	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Jun. 07, 2018	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Jun. 07, 2018	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	70187
Jun. 07, 2018	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	70187
Jun. 06, 2018	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	70187

May 28, 2018	TEAS SECTION 8 & 9 RECEIVED	
May 27, 2017	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Apr. 10, 2014	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Apr. 10, 2014	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	76985
Mar. 26, 2014	REGISTERED - SEC. 8 (6-YR) & SEC. 15 FILED	76985
Apr. 10, 2014	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	76985
Mar. 26, 2014	TEAS SECTION 8 & 15 RECEIVED	
Feb. 22, 2012	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
Feb. 17, 2012	ATTORNEY/DOM.REP.REVOKED AND/OR APPOINTED	
Feb. 17, 2012	TEAS REVOKE/APP/CHANGE ADDR OF ATTY/DOM REP RECEIVED	
May 27, 2008	REGISTERED-PRINCIPAL REGISTER	
Mar. 11, 2008	PUBLISHED FOR OPPOSITION	
Feb. 20, 2008	NOTICE OF PUBLICATION	
Feb. 04, 2008	LAW OFFICE PUBLICATION REVIEW COMPLETED	68171
Feb. 04, 2008	APPROVED FOR PUB - PRINCIPAL REGISTER	
Feb. 04, 2008	DATA MODIFICATION COMPLETED	68171
Jan. 16, 2008	TEAS/EMAIL CORRESPONDENCE ENTERED	88889
Jan. 16, 2008	CORRESPONDENCE RECEIVED IN LAW OFFICE	88889
Jan. 16, 2008	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Jul. 17, 2007	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Jul. 17, 2007	NON-FINAL ACTION E-MAILED	6325
Jul. 17, 2007	NON-FINAL ACTION WRITTEN	81847
Jul. 15, 2007	ASSIGNED TO EXAMINER	81847
May 03, 2007	PRELIMINARY/VOLUNTARY AMENDMENT - ENTERED	68171
May 03, 2007	ASSIGNED TO LIE	68171
Apr. 06, 2007	TEAS VOLUNTARY AMENDMENT RECEIVED	
Apr. 04, 2007	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE **Date in Location:** Jun. 07, 2018

Assignment Abstract Of Title Information

Summary

Total Assignments: 2 **Registrant:** Shinco Electronics Group Co., Ltd.

Assignment 1 of 2

Conveyance: ASSIGNS THE ENTIRE INTEREST

Reel/Frame: 4719/0198 **Pages:** 3

Date Recorded: Feb. 17, 2012

Supporting Documents: assignment-tm-4719-0198.pdf

Assignor

Name: SHINCO ELECTRONICS GROUP CO., LTD. **Execution Date:** Feb. 15, 2012

Legal Entity Type: CORPORATION **State or Country Where Organized:** CHINA

Assignee

Name: JIANGSU SHINCO ELECTRICAL APPLIANCES CO., LTD

Legal Entity Type: CORPORATION **State or Country Where Organized:** CHINA

Address: NO. 118, DONGDU WEST ROAD
LUOYANG TOWN, WUJIN DISTRICT
CHANGZHOU CITY, JIANGSU PROVINCE, CHINA

Correspondent

Correspondent Name:	MAX VERN
Correspondent Address:	AMSTER, ROTHSTEIN & EBENSTEIN LLP 90 PARK AVENUE NEW YORK, NY 10016

Domestic Representative

Domestic Representative Name:	MAX VERN
Domestic Representative Address:	AMSTER, ROTHSTEIN & EBENSTEIN LLP 90 PARK AVENUE NEW YORK, NY 10016

Assignment 2 of 2

Conveyance:	ASSIGNS THE ENTIRE INTEREST		
Reel/Frame:	7419/0822	**Pages:**	3
Date Recorded:	Sep. 13, 2021		
Supporting Documents:	assignment-tm-7419-0822.pdf		

Assignor

Name:	JIANGSU SHINCO ELECTRICAL APPLIANCES CO., LTD.	**Execution Date:**	Aug. 31, 2021
Legal Entity Type:	CORPORATION	**State or Country Where Organized:**	CHINA

Assignee

Name:	JIANGSU YOAU ELECTRIC CO., LTD.		
Legal Entity Type:	CORPORATION	**State or Country Where Organized:**	CHINA
Address:	WUJIN DISTRICT, CHANGZHOU CITY, LIJIA VILLAGE, LIJIA TOWN, JIANGSU PROVINCE, CHINA		

Correspondent

Correspondent Name:	ANGEL ROMAN CAMPOS
Correspondent Address:	4000 LEGATO RD SUITE 310 FAIRFAX, VA 22033

Domestic Representative

Domestic Representative Name:	JOE MCKINNEY MUNCY
Domestic Representative Address:	4000 LEGATO ROAD SUITE 310 FAIRFAX, VA 22033

Shinco

KF-25GW/I KFR-25GW/I
KF-35GW/I KFR-35GW/I

- Unique designed air inlet,lower noise and raise efficiency
- "Oxygen bar"function,emit oxygen continuously
- Auto-selected air direction,meets all the families demands
- Detachable and flat panel,easy to clean
- High efficient intelligent defrost function
- Effective dust strainer/anion generator/ light catalyst for health(selectable)
- Random pitch fan , quiet run and low noise
- International famous-brand high efficiency compressor
- Powerful dehumidification
- Fuzzy controlled by microcomputer

Cooling Only Cooling & Heating

KF-25GW/IM KFR-25GW/IM
KF-35GW/IM KFR-35GW/IM

- Unique designed air inlet,lower noise and raise efficiency
- "Oxygen bar"function,emit oxygen continuously
- Auto-selected air direction,meets all the families demands
- Detachable and flat panel,easy to clean
- High efficient intelligent defrost function
- Effective dust strainer/anion generator/ light catalyst for health(selectable)
- Random pitch fan , quiet run and low noise
- International famous-brand high efficiency compressor
- Powerful dehumidification
- Fuzzy controlled by microcomputer

Cooling Only Cooling & Heating

Model			KF-25GW/I	KFR-25GW/I	KF-35GW/I	KFR-35GW/I	KF-25GW/IM	KFR-25GW/IM	KF-35GW/IM	KFR-35GW/IM
Capacity										
Cooling/Heating		Btu/h	9000	9000/9360	12000	12000/13000	9000	9000/9360	12000	12000/13000
Electrical Parts										
Voltage,Phase,Frequency		V~,Ph,Hz	220~,1,50	220~,1,50	220~,1,50	220~,1,50	220~,1,50	220~,1,50	220~,1,50	220~,1,50
Power Input	Cooling/Heating	W	930	950/930	1370	1360/1250	930	950/930	1370	1360/1250
Operating Current	Cooling/Heating	A	4.3	4.4/4.3	6.3	6.2/5.7	4.3	4.4/4.3	6.3	6.2/5.7
Performance										
Air Flow Volume	Indoor	m³/h	350	350	550	550	350	350	550	550
Noise Level	Indoor/Outdoor(High)	≤ dB(A)	41/52	41/52	44/54	44/54	41/52	41/52	44/36	44/37
Net Dimension & Weight										
Indoor Unit	WxHxD	mm	820x265x193	820x265x185	814x272x185	814x272x185	820x265x193	820x265x185	814x272x185	814x272x185
Outdoor Unit	WxHxD	mm	700x530x252	700x530x252	762x530x254	762x530x254	700x530x252	700x530x252	762x530x254	762x530x254
Net Weight	Indoor/Outdoor	kg	8/26	8/27	11/36	11/37	8/26	8/27	11/36	11/37
Packing Dimension & Gross Weight										
Indoor Unit	WxHxD	mm	890x350x270	890x350x270	880x360x260	880x360x260	890x350x270	890x350x270	880x360x260	880x360x260
Outdoor Unit	WxHxD	mm	820x620x390	820x620x390	910x630x370	910x630x370	820x620x390	820x620x390	910x630x370	910x630x370
Gross Weight	Indoor/Outdoor	kg	10/29	10/30	13/39	13/40	10/29	10/30	13/39	13/40
Applicable Area										
		m²	10~18	10~18	16~24	16~24	10~18	10~18	16~24	16~24

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Mark: SWAMPY

Swampy

US Serial Number: 77074008

Application Filing Date: Jan. 01, 2007

US Registration Number: 3486976

Registration Date: Aug. 19, 2008

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Apr. 16, 2018

Publication Date: Jun. 03, 2008

Mark Information

Mark Literal Elements: SWAMPY

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air conditioners; Air conditioners for vehicles; Components for air conditioning and cooling systems, namely, evaporative air coolers; Cooling evaporators; Evaporative air coolers; Evaporative air cooling units for domestic use; Evaporators for air conditioners; Window-mounting air-conditioners

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Mar. 03, 1992

Use in Commerce: Mar. 03, 1992

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU: No

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E: No

Currently 66A: No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Stich, John L.

Composed of: John L. Stich, a US Citizen

Owner Address: 2534 W. Medina Ave
Mesa, ARIZONA UNITED STATES 85202

Legal Entity Type: TRUST **State or Country Where Organized:** ARIZONA

Attorney/Correspondence Information

Attorney of Record - None

Correspondent

Correspondent Name/Address: STICH, JOHN L.
2534 W. Medina Ave
MESA, ARIZONA UNITED STATES 85202

Phone: 480-897-1233 **Fax:** 480-897-9530

Correspondent e-mail: swampy1@swampy.net jack@swampy.net **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Apr. 16, 2018	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Apr. 16, 2018	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	77074
Apr. 16, 2018	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	77074
Apr. 16, 2018	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	77074
Apr. 04, 2018	TEAS SECTION 8 & 9 RECEIVED	
Aug. 19, 2017	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Aug. 07, 2014	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Aug. 07, 2014	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	66607
Aug. 07, 2014	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	66607
Jul. 22, 2014	TEAS SECTION 8 & 15 RECEIVED	
Jul. 22, 2014	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Aug. 19, 2008	REGISTERED-PRINCIPAL REGISTER	
Jun. 03, 2008	PUBLISHED FOR OPPOSITION	
May 14, 2008	NOTICE OF PUBLICATION	
Apr. 30, 2008	LAW OFFICE PUBLICATION REVIEW COMPLETED	77075
Apr. 30, 2008	APPROVED FOR PUB - PRINCIPAL REGISTER	
Apr. 30, 2008	DATA MODIFICATION COMPLETED	77075
Apr. 03, 2008	AMENDMENT FROM APPLICANT ENTERED	77075
Apr. 03, 2008	CORRESPONDENCE RECEIVED IN LAW OFFICE	77075
Apr. 04, 2008	PETITION GRANTED - RESPONSE RECEIVED	66600
Mar. 24, 2008	COMMUNICATION RECEIVED FROM PETITIONER	
Mar. 24, 2008	PAPER RECEIVED	
Feb. 29, 2008	INCOMPLETE PETITION NOTICE MAILED	66600
Jan. 08, 2008	PETITION TO REVIVE-RECEIVED	
Jan. 08, 2008	FAX RECEIVED	
Jan. 02, 2008	ABANDONMENT NOTICE MAILED - INCOMPLETE RESPONSE	
Jan. 01, 2008	ABANDONMENT - INCOMPLETE RESPONSE	
Nov. 21, 2007	TEAS/EMAIL CORRESPONDENCE ENTERED	77075
Nov. 21, 2007	CORRESPONDENCE RECEIVED IN LAW OFFICE	77075
Nov. 12, 2007	TEAS RESPONSE TO OFFICE ACTION RECEIVED	

Aug. 06, 2007	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Aug. 06, 2007	NON-FINAL ACTION E-MAILED	6325
Aug. 06, 2007	NON-FINAL ACTION WRITTEN	76463
Jul. 27, 2007	TEAS/EMAIL CORRESPONDENCE ENTERED	77075
Jul. 27, 2007	CORRESPONDENCE RECEIVED IN LAW OFFICE	77075
Jul. 25, 2007	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Jun. 26, 2007	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Jun. 26, 2007	NON-FINAL ACTION E-MAILED	6325
Jun. 26, 2007	NON-FINAL ACTION WRITTEN	76463
May 22, 2007	TEAS/EMAIL CORRESPONDENCE ENTERED	77075
May 22, 2007	CORRESPONDENCE RECEIVED IN LAW OFFICE	77075
May 22, 2007	ASSIGNED TO LIE	77075
May 02, 2007	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Apr. 23, 2007	NON-FINAL ACTION E-MAILED	6325
Apr. 23, 2007	NON-FINAL ACTION WRITTEN	76463
Apr. 20, 2007	ASSIGNED TO EXAMINER	76463
Jan. 04, 2007	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE **Date in Location:** Apr. 16, 2018

The 12-Volt *Swampy*

Instruction Booklet & Warrantee

Swampy Cooling Systems since 1992

Portable Cooling **will not typically cool an entire Vehicle or room. Use like a fan and then enjoy the cooler air.**

Caution: Read A. through E before operating.

A. Do not run on high for more than a few seconds until you know your wiring is adequate (Read #7, 10 & 13)

B. Never allow your Swampy to spray water as it may deteriorate important parts. (Read #7 & #10).

C. Treat *Swampy* like a cold glass of water when setting on fine furniture.

D. You must not re-circulate *Cooler's* cooled air. Allow plenty of ventilation or Swampy will not cool (Why? Read #8 & #9).

E. Always store the Cooler Upright until the Filter Pads are dry or they will loose their cooling properties.

Limited one-year Warrantee:

S & S Manufacturing warrants, for one year from the date of the purchase, any Swampy that does not perform satisfactorily due to defects caused by faulty material or workmanship. Our obligation assumed under this warranty is limited to the repair or replacement of parts, without charge, which are defective and which have not been misused, carelessly handled, or **defaced** by repairs made or attempted by others. Consequential Damages due to this product are not covered. This warranty gives you specific legal rights. You may also have other rights, which vary State to State. The complete product must be returned, transportation prepaid, to S&S Mfg. Phone (480) 897-1233 for the address of you're nearest warrantee service or on the Internet at www.swampy.net.

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Mark: SENSI-COIL

SENSI-COIL

US Serial Number: 77429910

Application Filing Date: Mar. 24, 2008

US Registration Number: 3520104

Registration Date: Oct. 21, 2008

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Aug. 22, 2018

Publication Date: Aug. 05, 2008

Mark Information

Mark Literal Elements: SENSI-COIL

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Components for air conditioning and cooling systems, namely, evaporative air coolers

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Jul. 01, 2006

Use in Commerce: Jul. 01, 2006

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU: No

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E: No

Currently 66A: No

Filed 66A: No

Currently No Basis: No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Evapco, Inc.

Owner Address: 5151 Allendale Lane
Taneytown, MARYLAND UNITED STATES 21787

Legal Entity Type: CORPORATION

State or Country Where Organized: MARYLAND

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Laura A. Genovese

Docket Number: EVP.5006

Attorney Primary Email Address: lgenovese@kassgen.com

Attorney Email Authorized: Yes

Correspondent

Correspondent Name/Address: LAURA A. GENOVESE
K & G Law LLC
602 S. Bethlehem Pike Bldg B
Ambler, PENNSYLVANIA UNITED STATES 19002

Phone: 267-468-7961

Correspondent e-mail: lgenovese@kassgen.com csmith@kassgen.com

Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Aug. 22, 2018	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Aug. 22, 2018	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	76985
Aug. 22, 2018	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	76985
Aug. 22, 2018	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	76985
Aug. 10, 2018	TEAS SECTION 8 & 9 RECEIVED	
Oct. 21, 2017	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Dec. 06, 2014	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Nov. 04, 2014	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Nov. 04, 2014	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	77315
Nov. 03, 2014	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	77315
Oct. 22, 2014	TEAS SECTION 8 & 15 RECEIVED	
Oct. 21, 2008	REGISTERED-PRINCIPAL REGISTER	
Oct. 07, 2008	ASSIGNED TO EXAMINER	82437
Aug. 05, 2008	PUBLISHED FOR OPPOSITION	
Jul. 16, 2008	NOTICE OF PUBLICATION	
Jun. 27, 2008	LAW OFFICE PUBLICATION REVIEW COMPLETED	70884
Jun. 27, 2008	ASSIGNED TO LIE	70884
Jun. 26, 2008	APPROVED FOR PUB - PRINCIPAL REGISTER	
Jun. 26, 2008	ASSIGNED TO EXAMINER	80811
Mar. 27, 2008	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE

Date in Location: Aug. 22, 2018


CTI
MANUFACTURER'S PUBLISHED THERMAL PERFORMANCE IS CERTIFIED BY THE COOLING TOWER INSTITUTE UNDER THE PROVISIONS OF STD-201 (92).
evapco
EVAPCO, INC. Midwest Plant
York Road Greenup, Illinois 62428
(217) 923-3431
MODEL NO.
SERIAL NO.
GOIL TEST PRESSURE
PSI G
SET NO.
Featuring the evapco
Sensi-COIL
US PATENT PENDING
EVAPCO UNIT LUBRICATION INSTRUCTIONS
FAN SHAFT BEARINGS:
Lubricate inclined shaft unit fan shaft bearings every 1000 hours or every 3 months. Lubricate lateral unit bearings every 2000 hours or every 6 months. Use any of the following waterproof grease:
Chevron SRI
Texaco Polyurea 2 Grease
Exxon Polyrex EM
FAN SHAFT SLEEVE BEARINGS (forced draft units only):
Lubricate fan shaft sleeve bearings with the oil provided in the gear box every 1000 hours or every 3 months. Do not use a detergent based oil. Use any of the following oils:
Texaco: Regal 220 R&O
Exxon: Teresstic 220
GEARBOX (when supplied):
Replace the original oil after 500 hours or 4 weeks of operation. Thereafter change the oil every 2500 hours or every 6 months. Use any of the following rust and oxidation inhibited gear oils*:
Texaco: Regal 220 R&O
Exxon: Teresstic 220
Chevron: A W Machine oil 220
Mobil: DTE OIL 26
PUMP AND FAN MOTOR BEARINGS:
Refer to the motor manufacturer's lubrication instructions enclosed with the unit.
* FOR ADDITIONAL LUBRICATION INFORMATION REFER TO THE MAINTENANCE INSTRUCTION MANUAL ENCLOSED WITH THE UNIT.
P/N 015-04809A
THIS UNIT COMPLIES WITH THE ENERGY

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Mark: MARINAIRE

MarinAire

US Serial Number: 77804517

Application Filing Date: Aug. 13, 2009

US Registration Number: 3757563

Registration Date: Mar. 09, 2010

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Apr. 10, 2019

Publication Date: Dec. 22, 2009

Mark Information

Mark Literal Elements: MARINAIRE

Standard Character Claim: No

Mark Drawing Type: 5 - AN ILLUSTRATION DRAWING WITH WORD(S) /LETTER(S)/ NUMBER(S) INSTYLIZED FORM

Description of Mark: The mark consists of "MarinAire" The letter "M" and "A" are in upper case, other letters are in lower case, all letters are in blue color.

Color Drawing: Yes

Color(s) Claimed: The color(s) blue is/are claimed as a feature of the mark.

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: [Air cleaning units; Air cleaning units containing an air filter, ultraviolet lights and a photocatalytic filter;] Air conditioners; Air conditioners for vehicles; Air conditioning apparatus; Air conditioning apparatus and installations; Air conditioning installations; [Air conditioning panels for use in walk-in coolers;] Air conditioning units; Air cooling apparatus; Air filtering installations; Air filters for air conditioning units; Air filters for domestic use; [Air filters for industrial installations;] [Air purification units; Air purifiers; Air purifying apparatus; Air purifying apparatus and machines; Air purifying units for vehicles, commercial and residential building use;] Air-conditioning apparatus; Air-conditioning apparatus and installations; Air-conditioning installations; Air-conditioning, air cooling and ventilation apparatus and instruments; Central air-conditioning installations; Components for air conditioning and cooling systems, namely, evaporative air coolers; [Dampers, namely, control devices used in air ducts to regulate the flow of air; Dispensing units for air fresheners;] [Dryers for the removal of water vapor from compressed air and gases; Dryers used for the removal of solid, liquid and vapor contaminants from compressed air and gases]

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Oct. 07, 2008 **Use in Commerce:** Jul. 01, 2009

Basis Information (Case Level)

Filed Use:	Yes	**Currently Use:**	Yes
Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Marinaire LLC.

Owner Address: 11129 NW 122ND ST
11129 NW 122ND ST
MEDLEY, FLORIDA UNITED STATES 33178

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** FLORIDA

Attorney/Correspondence Information

Attorney of Record - None

Correspondent

Correspondent Name/Address: MARINAIRE TECHNOLOGIES INC
11129 NW 122ND ST
11129 NW 122ND ST
MEDLEY, FLORIDA UNITED STATES 33178

Phone: 8007248071 **Fax:** 3057486071

Correspondent e-mail: info@marinaire.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Apr. 10, 2019	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Apr. 10, 2019	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	76533
Apr. 10, 2019	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	76533
Apr. 10, 2019	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	76533
Mar. 09, 2019	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Mar. 09, 2019	TEAS SECTION 8 & 9 RECEIVED	
Mar. 09, 2019	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Nov. 02, 2018	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Nov. 02, 2018	APPLICANT/CORRESPONDENCE CHANGES (NON-RESPONSIVE) ENTERED	88888
Nov. 02, 2018	TEAS CHANGE OF OWNER ADDRESS RECEIVED	
Feb. 01, 2016	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Feb. 01, 2016	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	66607
Jan. 30, 2016	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	66607
Nov. 20, 2015	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Nov. 20, 2015	TEAS SECTION 8 & 15 RECEIVED	
Mar. 09, 2015	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Mar. 09, 2010	REGISTERED-PRINCIPAL REGISTER	
Dec. 22, 2009	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Dec. 22, 2009	PUBLISHED FOR OPPOSITION	
Nov. 19, 2009	LAW OFFICE PUBLICATION REVIEW COMPLETED	69350
Nov. 18, 2009	APPROVED FOR PUB - PRINCIPAL REGISTER	

Nov. 17, 2009	ASSIGNED TO EXAMINER	83705
Nov. 05, 2009	PRELIMINARY/VOLUNTARY AMENDMENT - ENTERED	69350
Nov. 05, 2009	ASSIGNED TO LIE	69350
Oct. 28, 2009	TEAS VOLUNTARY AMENDMENT RECEIVED	
Aug. 18, 2009	NOTICE OF PSEUDO MARK MAILED	
Aug. 17, 2009	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Aug. 17, 2009	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

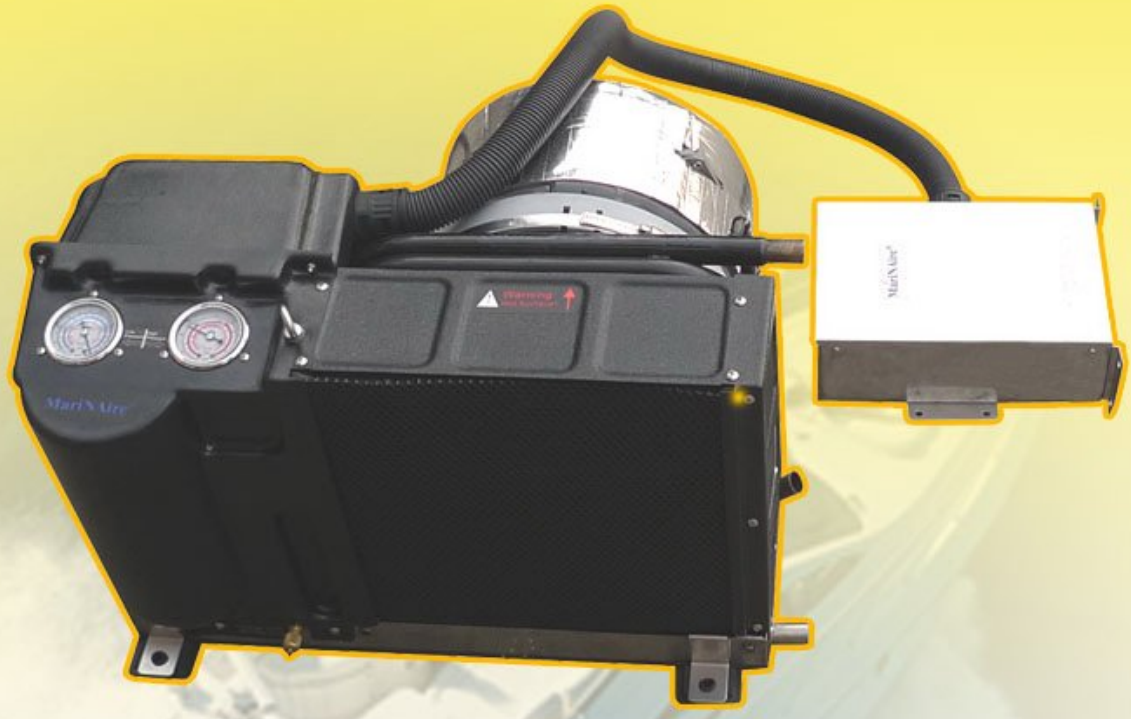
File Location

Current Location: GENERIC WEB UPDATE **Date in Location:** Apr. 10, 2019

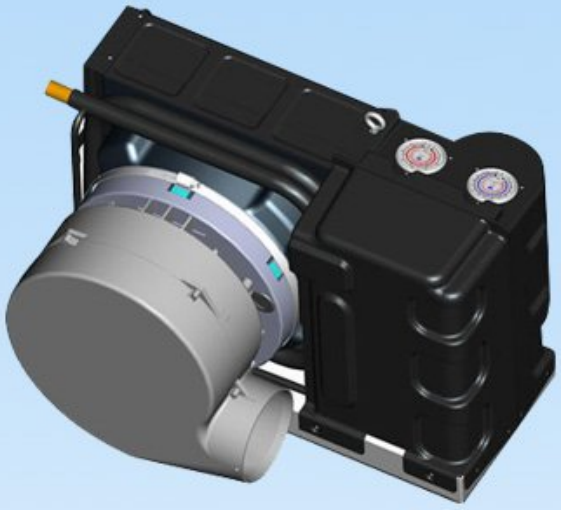

Low Pressure
High Pressure
MarinAire©
Charge Port
(R410a Only)

MarinAire®

Comfort you deserve



MarinAire®



Newly developped MSA series are milestone in marine air conditioning systems. Unique construction with Light weight materials, they add less weight to your boat, resulting less fuel consumption and easier to maintain.

Compact Size

It's great features come in small size. MSA series made in smallest possible size to fit tiny enclosures. Although it has bigger coils for higher efficiency, the extreme engineering made it smallest size possible.

Built in Pressure Gauges.

MSA series are equipped with built in high pressure and low pressure gauges. Built-in pressure gauges bring easiness to monitor the air conditioner and diagnose how healthy it is operating. The gauges are installed in an angle that makes it readable horizontally and vertically.

Sound Cover

MSA series come with sound cover around the compressor compartment as standard accessory. The sound covers reduce the noise level by 60%

360 Degree Rotatable Blower

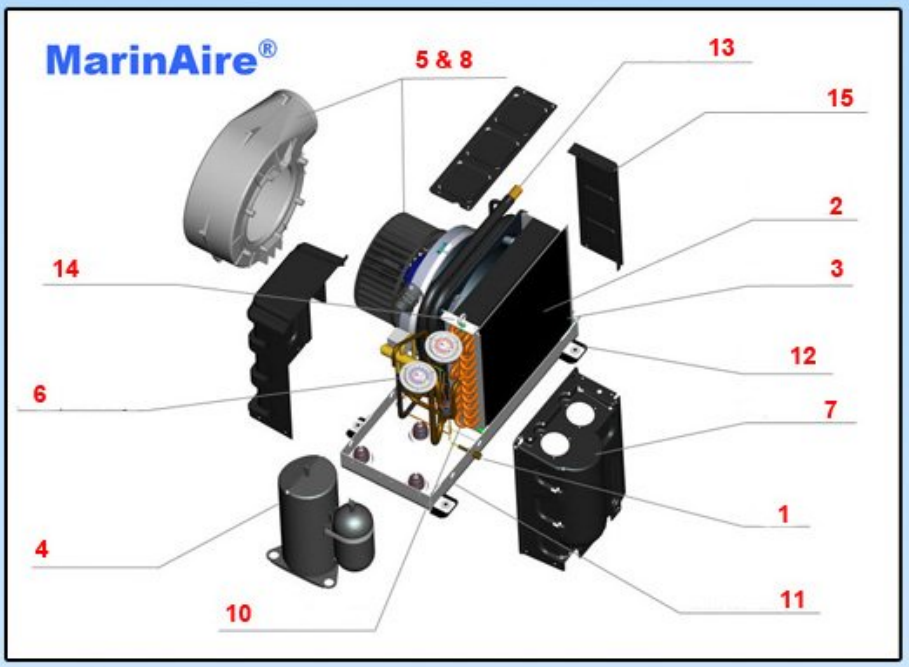
The unique design makes very easy to rotate the blower outlet. The blower can be rotated in any angle within minutes.

Environmentally Friendly with new R410A Refrigerant

As standard, all MSA series come with R410A refrigerant pre-charged. The new refrigerant R410A is not only environmentally friendly, it also provides higher heating and cooling efficiency for low energy consumption.

Easy Charging Port

Thanks to its 1/4" NPT standard charging port, MSA series are the easiest units in the market for charging refrigerant. There is no need to remove the unit or disassemble any part.



*** 1. Easy Charging Port**
Thanks to its 1/4" NPT standard charging port, MSA series are the easiest units in the market for charging refrigerant. There is no need to remove the unit or disassemble any part.

*** 2. Hydrophilic Coated Aluminum Fins**
Hydrophilic coating on the aluminum fins makes the condensate water to slide down easily. Water drops do not stick to the fins and this feature prevent pressure drop for better air flow. The hydrophilic coating also provide strength to the coil in seawater environment to last 50% longer than regular coils.

*** 3. Washable Return Filter**
Washable/permanent return filter protects the coil from dust and other particles in the air. This filter is a secondary filter to field installed filtered return grille. This feature makes sure that the coil is not blocked and clean air is circulated all the time.

*** 4. Toshiba R410A High Efficiency Compressor**
MSA series bear Japanese Toshiba compressor. Latest technology Toshiba rotary compressors deliver high efficiency performance with low noise level.

*** 5. High Static Centrifugal Blower**
Specially designed blower wheel and scroll cage produce high static output with low noise level. Designed by German Aerodynamic engineers for an exact fit to MSA units.

*** 6. Built-in High Pressure and Low Pressure Gauges**
MSA series are equipped with built in high pressure and low pressure gauges. Built-in pressure gauges bring easiness to monitor the air conditioner and diagnose how healthy it is operating. The gauges are installed in an angle that makes it readable horizontally and vertically.

*** 7. Compressor Sound Cover**
MSA series come with sound cover around the compressor compartment as standard accessory. The sound covers reduce the noise level by 60%

*** 8. 360 Degree Rotatable Blower**
The unique design makes very easy to rotate the blower outlet. The blower can be rotated in any angle within minutes.

*** 9. Environmentally Friendly with new R410A Refrigerant**
As standard, all MSA series come with R410A refrigerant pre-charged. The new refrigerant R410A is not only environmentally friendly, it also provides higher heating and cooling efficiency for low energy consumption.

*** 10. 3 Row Inner grooved Copper tube**
Contrary to the competitors have only 2 row coil, the MSA unit's Evaporator coil is made of 3 Row coil. Inner groove in the copper tubes create turbulence and increased heat exchange capacity. This feature provide better efficiency, low energy consumption and ice cold air through the outlets.

*** 11. Stainless Steel Bottom panel**
Bottom panel is made of heavy gauge high quality 304 grade stainless steel material. The panel will last decades free from corrosion
and rust.

*** 12. Vibration absorbers**
Vibration absorbers provide isolation between boat and the air conditioner. This feature prevents the vibration from the boat engine to be passed to the air conditioner, enabling the compressor, fan and other components to operate healthier.

*** 13. High Efficiency Coaxial Heat Exchanger**
The premium quality Copper-Nickel heat exchanger provide very high heat exchange capacity. Perfect for sea water and fresh water.

*** 14. Lifting Hook**
Lifting hook bring easiness to handle the unit during installation and maintenance. since the competitor's products have no place to hold their units, they usually have damages to the unit during installation, or injuries occur to the installer.

*** 15. Molded Plastic Parts and covers.**
Specially designed molds and plastic parts make the unit lighter in weight and stronger against corrosion and rust. Contrary to the other products that made of sheet metals that rust within few months, our products can last decades free from Corrosion and rust.

Model			MSA9K2	MSA12K2
Power supply		V / Ph / HZ	110-120V / 1ph /60Hz	110-120V / 1ph /60Hz
Cooling	Capacity	Btu/h	9,000	12,000
	Input power	W	730	1108
	Reted current	A	6.8	9.78
	EER	Btu/w.h	12.3	10.8
Heating	Capcity	Btu/h	9,000	12,000
	Input	W	822	1115
	Rated current	A	7.4	9.93
	COP	W/W.h	3.21	3.15
Moisture Removal		L/h	1.6	1.8
Water Flow (Pump sold seperately)		GPH	135	180
Max. input consumption		W	1104	1104
Max. current		A	9.8	9.8
Starting current		A	40	40
Compressor	Type		Rotoray	Rotoray
	Brand		TOSHIBA	TOSHIBA
	Locked Rotor Amp	A	40.3	47.3
	Capacitor	uF	45	55
Fan Motor	Input	W	60	65
	Capacitor	uF	10	12
	Speed(hi/mi/lo)	r/min	1200/1100/1000	1400/1300/1200
Air flow (Hi/Mi/Lo)		cfm	260	320
noise level (Hi/Mi/Lo)		dB(A)	40	42
	Dimension(L*W*H)	inch	21 3/4" X 16' X 14 3/8"	21 3/4" X 16' X 14 3/8"
	Packing(L*W*H)	inch	25" X 16 3/4" X 18 1/2"	25" X 16 3/4" X 18 1/2"
	Net/Gross weight	LBS	62.7 / 76	63.8 / 77.2
Refrigerant type / Charging amount		LBS	R410A / 1.3	R410A / 1.6
Operation temp		F	61 ~ 86	61 ~ 86
Entering Water temp (Heating Mode)		F	40 ~ 77	40 ~ 77
Entering Water temp (Cooling Mode)		F	60 ~ 95	60 ~ 95
Application area		ft3 / m3	350-500 / 10-15	500-700 / 15-20

Values given based on below conditions:
Cooling: EWT 80 F , EAT (DB/WB) : 80/67F
Heating: EWT 45 F , EAT (DB/WB): 68/59F
Specifications may be changed without prior notice.

Marinaire ®
Miami FL USA
Toll Free: 1-800-724-8071
Email: sales@marinaire.com
Web: www.marinaire.com

Generated on: This page was generated by TSDR on 2023-07-31 12:30:44 EDT

Mark: ECO TERRA

ECO TERRA

US Serial Number: 85043561

Application Filing Date: May 20, 2010

US Registration Number: 4050202

Registration Date: Nov. 01, 2011

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Sep. 16, 2022

Publication Date: Oct. 26, 2010 **Notice of Allowance Date:** Dec. 21, 2010

Mark Information

Mark Literal Elements: ECO TERRA

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Disclaimer: "ECO"

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: [AIR CLEANING UNITS CONTAINING AN AIR FILTER, ULTRAVIOLET LIGHTS AND A PHOTOCATALYTIC FILTER;] AIR CONDITIONERS; [AIR CONDITIONERS FOR VEHICLES;] AIR CONDITIONING APPARATUS; AIR CONDITIONING UNITS; [AIR PURIFICATION UNITS; AIR PURIFIERS;] COMPONENTS FOR AIR CONDITIONING AND COOLING SYSTEMS, namely, EVAPORATIVE AIR COOLERS; [DEHUMIDIFIERS; ELECTRIC FANS; ELECTRIC PATIO HEATERS; ELECTRIC RADIANT HEATERS; ELECTRIC REFRIGERATORS; ELECTRIC SPACE HEATERS; INDUSTRIAL AIR PURIFIERS; WATER COOLERS;] WINDOW-MOUNTING AIR-CONDITIONERS

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: May 01, 2011

Use in Commerce: May 01, 2011

Basis Information (Case Level)

Filed Use: No

Currently Use: Yes

Filed ITU: Yes

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: EPIC HOLDINGS LLC

Owner Address: 7260 EDINGTON DR.
CINCINNATI, OHIO UNITED STATES 45249

Legal Entity Type:	LIMITED LIABILITY COMPANY	**State or Country Where Organized:**	OHIO

Attorney/Correspondence Information

Attorney of Record

Attorney Name:	April L. Besl	**Docket Number:**	39133-5
Attorney Primary Email Address:	april.besl@dinsmore.com	**Attorney Email Authorized:**	Yes

Correspondent

Correspondent Name/Address: April L. Besl
Dinsmore & Shohl LLP
255 E. 5th Street, Suite 1900
Cincinnati, OHIO UNITED STATES 45202

Phone:	513-977-8200, ext. 8527	**Fax:**	513-977-8141
Correspondent e-mail:	april.besl@dinsmore.com trademarks@dinsmore.com kristi.wells@dinsmore.com andrew.hilton@dinsmore.com	**Correspondent e-mail Authorized:**	Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Sep. 16, 2022	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Sep. 16, 2022	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	30049
Sep. 16, 2022	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	30049
Jul. 07, 2022	TEAS RESPONSE TO OFFICE ACTION-POST REG RECEIVED	
Jun. 13, 2022	PROOF OF USE INTERIM ACTION ISSUED	30049
May 13, 2022	TEAS RESPONSE TO OFFICE ACTION-POST REG RECEIVED	
Jan. 07, 2022	OFFICE ACTION ISSUED POU2	30049
Jan. 07, 2022	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	30049
Dec. 03, 2021	TEAS RESPONSE TO OFFICE ACTION-POST REG RECEIVED	
Jun. 04, 2021	OFFICE ACTION ISSUED POU1	30070
Jun. 04, 2021	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	30070
May 12, 2021	TEAS SECTION 8 & 9 RECEIVED	
Feb. 17, 2021	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
Nov. 01, 2020	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Sep. 30, 2017	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Sep. 30, 2017	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	70131
Sep. 30, 2017	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	70131
Aug. 30, 2017	TEAS SECTION 8 & 15 RECEIVED	
Nov. 01, 2016	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Nov. 01, 2011	REGISTERED-PRINCIPAL REGISTER	
Sep. 24, 2011	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
Sep. 23, 2011	LAW OFFICE REGISTRATION REVIEW COMPLETED	69712
Sep. 09, 2011	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Sep. 09, 2011	NOTICE OF APPROVAL OF EXTENSION REQUEST E-MAILED	
Sep. 08, 2011	STATEMENT OF USE PROCESSING COMPLETE	66230

Aug. 31, 2011	USE AMENDMENT FILED	66230
Sep. 08, 2011	SOU EXTENSION 1 GRANTED	66230
Jun. 21, 2011	SOU EXTENSION 1 FILED	66230
Sep. 06, 2011	CASE ASSIGNED TO INTENT TO USE PARALEGAL	66230
Aug. 31, 2011	TEAS STATEMENT OF USE RECEIVED	
Aug. 31, 2011	EXTENSION RECEIVED WITH TEAS PETITION	
Aug. 31, 2011	PETITION TO REVIVE-GRANTED	88889
Aug. 31, 2011	TEAS PETITION TO REVIVE RECEIVED	
Jul. 25, 2011	ABANDONMENT NOTICE MAILED - NO USE STATEMENT FILED	
Jul. 25, 2011	ABANDONMENT - NO USE STATEMENT FILED	99999
Dec. 21, 2010	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
Oct. 26, 2010	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Oct. 26, 2010	PUBLISHED FOR OPPOSITION	
Sep. 20, 2010	LAW OFFICE PUBLICATION REVIEW COMPLETED	69712
Sep. 20, 2010	ASSIGNED TO LIE	69712
Sep. 10, 2010	APPROVED FOR PUB - PRINCIPAL REGISTER	
Sep. 09, 2010	EXAMINER'S AMENDMENT ENTERED	88888
Sep. 09, 2010	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Sep. 09, 2010	EXAMINERS AMENDMENT E-MAILED	6328
Sep. 09, 2010	EXAMINERS AMENDMENT -WRITTEN	86337
Sep. 02, 2010	ASSIGNED TO EXAMINER	86337
May 25, 2010	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
May 24, 2010	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE **Date in Location:** Sep. 16, 2022

Assignment Abstract Of Title Information

Summary

Total Assignments: 1 **Registrant:** MJC SUPPLY LLC

Assignment 1 of 1

Conveyance: ASSIGNS THE ENTIRE INTEREST

Reel/Frame: 7184/0451 **Pages:** 6

Date Recorded: Feb. 08, 2021

Supporting Documents: assignment-tm-7184-0451.pdf

Assignor

Name: MJC SUPPLY LLC **Execution Date:** Feb. 08, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** CALIFORNIA

Assignee

Name: EPIC HOLDINGS LLC

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** OHIO

Address: 7260 EDINGTON DR.
CINCINNATI, OHIO 45249

Correspondent

Correspondent Name: APRIL L. BESL

Correspondent Address: 255 E. FIFTH ST., SUITE 1900
CINCINNATI, OH 45202

Domestic Representative - Not Found


ECO TERRA
Packaged Terminal Air Conditioner
HEAT PUMP Remote Controlled Unit,
Cooling and Heating Unit
Model:SPTAC-12H
Dimensions: 42 "W×16 "D×22 "H
Net Weight: 141.1 lbs
Gross Weight: 149.9 lbs
S.N.:
Made in China
ECO TERRA
Packaged Terminal Air Conditioner
HEAT PUMP Remote Controlled Unit,
Cooling and Heating Unit
Model:SPTAC-12H
Dimensions:42"W×21.85"D×16"H
Net Weight: 134 lbs
Gross Weight:143 lbs
S.N.:
Made in China

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Mark: OSLO

US Serial Number: 85043633

Application Filing Date: May 20, 2010

US Registration Number: 4050203

Registration Date: Nov. 01, 2011

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor: LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: The registration has been renewed.

Status Date: Sep. 11, 2021

Publication Date: Oct. 26, 2010 **Notice of Allowance Date:** Dec. 21, 2010

Mark Information

Mark Literal Elements: OSLO

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of a stylized drawing of a triangular shape resembling the blade of a fan with a cross inside resembling an inverted design of the Norway flag, the stylized wording "OSLO" appears to the right.

Color(s) Claimed: Color is not claimed as a feature of the mark.

Design Search Code(s):
13.03.25 - Pumps, heat; Humidifiers; Air cleaner filters, household (furnace, a/c, etc.); Air conditioners; Baseboard heaters; Briquettes, charcoal; Bunsen burners; Charcoal briquettes; Coolers (ice chests); Heaters, space; Heaters, portable electric; Heat pumps; Filters, air cleaner (household); Fans, Window; Fans, electric; Fans, ceiling
24.09.25 - Bunting (flags); Flags, signal; Other flags
24.13.01 - Cross, Latin (shorter horizontal lines); Latin cross (shorter horizontal lines)
26.05.21 - Triangles that are completely or partially shaded
26.05.28 - Triangular shape (miscellaneous overall shape); Miscellaneous designs with overall triangular shape

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: AIR CLEANING UNITS CONTAINING AN AIR FILTER, ULTRAVIOLET LIGHTS AND A PHOTOCATALYTIC FILTER; AIR CONDITIONERS; AIR CONDITIONERS FOR VEHICLES; AIR CONDITIONING APPARATUS; AIR CONDITIONING UNITS; AIR PURIFICATION UNITS; AIR PURIFIERS; COMPONENTS FOR AIR CONDITIONING AND COOLING SYSTEMS, namely, EVAPORATIVE AIR COOLERS; DEHUMIDIFIERS; ELECTRIC FANS; ELECTRIC PATIO HEATERS; ELECTRIC RADIANT HEATERS; ELECTRIC REFRIGERATORS; ELECTRIC SPACE HEATERS; INDUSTRIAL AIR PURIFIERS; WATER COOLERS; WINDOW-MOUNTING AIR-CONDITIONERS

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: May 01, 2011 **Use in Commerce:** May 01, 2011

Basis Information (Case Level)

Filed Use: No **Currently Use:** Yes

Filed ITU: Yes **Currently ITU:** No

Filed 44D: No **Currently 44E:** No

Filed 44E: No **Currently 66A:** No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: EPIC HOLDINGS LLC

Owner Address: 7260 EDINGTON DR.
CINCINNATI, OHIO UNITED STATES 45249

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** OHIO

Attorney/Correspondence Information

Attorney of Record

Attorney Name: April L. Besl **Docket Number:** 39133-5

Attorney Primary Email Address: april.besl@dinsmore.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: April L. Besl
Dinsmore & Shohl LLP
255 E. 5th Street, Suite 1900
Cincinnati, OHIO UNITED STATES 45202

Phone: 513-977-8200, ext. 8527 **Fax:** 513-977-8141

Correspondent e-mail: april.besl@dinsmore.com trademarks@dinsmore.com kristi.wells@dinsmore.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Sep. 11, 2021	NOTICE OF ACCEPTANCE OF SEC. 8 & 9 - E-MAILED	
Sep. 11, 2021	REGISTERED AND RENEWED (FIRST RENEWAL - 10 YRS)	74886
Sep. 11, 2021	REGISTERED - SEC. 8 (10-YR) ACCEPTED/SEC. 9 GRANTED	74886
Sep. 11, 2021	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	74886
May 12, 2021	TEAS SECTION 8 & 9 RECEIVED	
Feb. 17, 2021	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
Nov. 01, 2020	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Sep. 30, 2017	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Sep. 30, 2017	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	70131
Sep. 30, 2017	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	70131
Aug. 30, 2017	TEAS SECTION 8 & 15 RECEIVED	
Nov. 01, 2016	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Nov. 01, 2011	REGISTERED-PRINCIPAL REGISTER	
Sep. 24, 2011	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
Sep. 23, 2011	LAW OFFICE REGISTRATION REVIEW COMPLETED	69712
Sep. 09, 2011	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Sep. 09, 2011	NOTICE OF APPROVAL OF EXTENSION REQUEST E-MAILED	
Sep. 08, 2011	STATEMENT OF USE PROCESSING COMPLETE	66230

Aug. 31, 2011	USE AMENDMENT FILED	66230
Sep. 08, 2011	SOU EXTENSION 1 GRANTED	66230
Jun. 21, 2011	SOU EXTENSION 1 FILED	66230
Sep. 06, 2011	CASE ASSIGNED TO INTENT TO USE PARALEGAL	66230
Aug. 31, 2011	TEAS STATEMENT OF USE RECEIVED	
Aug. 31, 2011	EXTENSION RECEIVED WITH TEAS PETITION	
Aug. 31, 2011	PETITION TO REVIVE-GRANTED	88889
Aug. 31, 2011	TEAS PETITION TO REVIVE RECEIVED	
Jul. 25, 2011	ABANDONMENT NOTICE MAILED - NO USE STATEMENT FILED	
Jul. 25, 2011	ABANDONMENT - NO USE STATEMENT FILED	99999
Dec. 21, 2010	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
Oct. 26, 2010	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Oct. 26, 2010	PUBLISHED FOR OPPOSITION	
Sep. 20, 2010	LAW OFFICE PUBLICATION REVIEW COMPLETED	69712
Sep. 20, 2010	ASSIGNED TO LIE	69712
Sep. 10, 2010	APPROVED FOR PUB - PRINCIPAL REGISTER	
Sep. 09, 2010	EXAMINER'S AMENDMENT ENTERED	88888
Sep. 09, 2010	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Sep. 09, 2010	EXAMINERS AMENDMENT E-MAILED	6328
Sep. 09, 2010	EXAMINERS AMENDMENT -WRITTEN	86337
Sep. 02, 2010	ASSIGNED TO EXAMINER	86337
May 26, 2010	NOTICE OF DESIGN SEARCH CODE MAILED	
May 25, 2010	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
May 24, 2010	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: GENERIC WEB UPDATE **Date in Location:** Sep. 11, 2021

Assignment Abstract Of Title Information

Summary

Total Assignments: 2 **Registrant:** MJC SUPPLY LLC

Assignment 1 of 2

Conveyance: ASSIGNS THE ENTIRE INTEREST

Reel/Frame: 7184/0451 **Pages:** 6

Date Recorded: Feb. 08, 2021

Supporting Documents: assignment-tm-7184-0451.pdf

Assignor

Name: MJC SUPPLY LLC **Execution Date:** Feb. 08, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** CALIFORNIA

Assignee

Name: EPIC HOLDINGS LLC

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** OHIO

Address: 7260 EDINGTON DR.
CINCINNATI, OHIO 45249

Correspondent

Correspondent Name: APRIL L. BESL

Correspondent 255 E. FIFTH ST., SUITE 1900

Address: CINCINNATI, OH 45202

Domestic Representative - Not Found

Assignment 2 of 2

Conveyance: SECURITY INTEREST

Reel/Frame: 7527/0260 **Pages:** 7

Date Recorded: Dec. 13, 2021

Supporting Documents: assignment-tm-7527-0260.pdf

Assignor

Name: COOPER MACHINERY SERVICES LLC **Execution Date:** Dec. 13, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** DELAWARE

Name: ENERGY DYNAMICS, LLC **Execution Date:** Dec. 13, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** TEXAS

Name: EPIC HOLDINGS, LLC **Execution Date:** Dec. 13, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** TEXAS

Assignee

Name: BMO HARRIS BANK N.A., AS COLLATERAL AGENT

Legal Entity Type: CHARTERED BANK **State or Country Where Organized:** CANADA

Address: 111 WEST MONROE
CHICAGO, ILLINOIS 60603

Correspondent

Correspondent Name: RAQUEL HALEEM C/O KATTEN MUCHIN ROSENMAN

Correspondent Address: 525 WEST MONROE STREET
CHICAGO, IL 60661

Domestic Representative - Not Found


OSLO
Garden Hose connector for continuous no-leak drainage.
Easy to Remove Bucket with Spill Prevention Cover
SPECIFICATIONS
Voltage: 115V (60Hz)
Watts: 410 W
Amps: 3.7 A
Dehumidifying Capacity: 30 Pints/Day
Air Flow (H/M/L): 190/170/150 CFM
Noise Level: 49/47/45 dB (A)
Product Dimensions: 19.25"H x 13.5"W x 10.25"D
Product Weight: 35.2 lbs
Model SG-DEH-30-2
30 PINT
DEHUMIDIFIER
with Humidistat
ENERGY STAR
One Year Limited Warranty
Soleus International, Inc
20035 E. Walnut Dr. North
City of Industry, CA 91789 USA
OSLO
Garden Hose connector for continuous no-leak drainage.
Easy to Remove Bucket with Spill Prevention Cover
SPECIFICATIONS
Voltage: 115V (60Hz)
Watts: 410 W
Amps: 3.7 A
Dehumidifying Capacity: 30 Pints/Day
Air Flow (H/M/L): 190/170/150 CFM
Noise Level: 49/47/45 dB (A)
Product Dimensions: 19.25"H x 13.5"W x 10.25"D
Product Weight: 35.2 lbs
Model SG-DEH-30-2
30 PINT
DEHUMIDIFIER
with Humidistat
ENERGY STAR
One Year Limited Warranty
Soleus International, Inc
20035 E. Walnut Dr. North
City of Industry, CA 91789 USA

Generated on: This page was generated by TSDR on 2023-07-31 12:31:48 EDT

Mark: QUÜL AIR CONDITIONER

US Serial Number: 86006236

Application Filing Date: Jul. 10, 2013

US Registration Number: 4500910

Registration Date: Mar. 25, 2014

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: A Sections 8 and 15 combined declaration has been accepted and acknowledged.

Status Date: Jun. 15, 2019

Publication Date: Jan. 07, 2014

Mark Information

Mark Literal Elements: QUÜL AIR CONDITIONER

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the word "QUÜL" spelled out in blue capital letters in the middle of the mark. Directly above are two blue mountain peaks with white snow covered tops. The mountain peak on the left is slightly larger than the one on the right. At the bottom of the mark and slightly to the right are the words "AIR CONDITIONER" spelled out in blue capital letters. The font of the previously mentioned words is smaller than that used in the word "QUÜL".

Color Drawing: Yes

Color(s) Claimed: The color(s) blue and white is/are claimed as a feature of the mark.

Disclaimer: "AIR CONDITIONER"

Design Search Code(s): 06.01.04 - Mountains (landscapes); Scenery with mountains
06.09.06 - Polar scenery; Icebergs; Snow-covered landscape

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air conditioning apparatus; Air conditioning apparatus and installations; Air conditioning installations; Air conditioning units; Air-conditioning apparatus; Air-conditioning apparatus; Air-conditioning apparatus and installations; Air-conditioning installations; Air-conditioning, air cooling and ventilation apparatus and instruments; Components for air conditioning and cooling systems, namely, evaporative air coolers

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: May 01, 2011 **Use in Commerce:** May 01, 2011

Basis Information (Case Level)

Filed Use: Yes **Currently Use:** Yes

Filed ITU: No **Currently ITU:** No

Filed 44D: No **Currently 44E:** No

Filed 44E: No **Currently 66A:** No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: STEEL AND PIPES, INC.

Owner Address: P.O. BOX 5309
CAGUAS PUERTO RICO 007265309

Legal Entity Type: CORPORATION **State or Country Where Organized:** PUERTO RICO

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Herman Hiraldo Sanchez

Attorney Primary Email Address: hhiraldo@hslawpr.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: HERMAN HIRALDO SANCHEZ
H&S LAW OFFICES P.S.C
352 AVE. SAN CLAUDIO PMB 329,
SAN JUAN, PUERTO RICO UNITED STATES 00926

Phone: 787-292-7564

Correspondent e-mail: hhiraldo@hslawpr.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Mar. 25, 2023	COURTESY REMINDER - SEC. 8 (10-YR)/SEC. 9 E-MAILED	
Jun. 15, 2019	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Jun. 15, 2019	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	66607
Jun. 15, 2019	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	66607
May 07, 2019	TEAS SECTION 8 & 15 RECEIVED	
Mar. 25, 2019	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Mar. 25, 2014	REGISTERED-PRINCIPAL REGISTER	
Jan. 07, 2014	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Jan. 07, 2014	PUBLISHED FOR OPPOSITION	
Dec. 18, 2013	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Dec. 03, 2013	LAW OFFICE PUBLICATION REVIEW COMPLETED	70884
Nov. 29, 2013	APPROVED FOR PUB - PRINCIPAL REGISTER	
Nov. 05, 2013	TEAS/EMAIL CORRESPONDENCE ENTERED	88889
Nov. 04, 2013	CORRESPONDENCE RECEIVED IN LAW OFFICE	88889
Nov. 04, 2013	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Oct. 31, 2013	DATA MODIFICATION COMPLETED	70884
Oct. 31, 2013	ASSIGNED TO LIE	70884
Oct. 31, 2013	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325

Oct. 31, 2013	NON-FINAL ACTION E-MAILED	6325
Oct. 31, 2013	NON-FINAL ACTION WRITTEN	78445
Oct. 18, 2013	ASSIGNED TO EXAMINER	78445
Jul. 19, 2013	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Jul. 18, 2013	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Jul. 13, 2013	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: TMO LAW OFFICE 117 **Date in Location:** Jun. 15, 2019

QUÜL
AIR CONDITIONERS

Getting Cool with QUÜL

Mini Split Wall Type Unit

Inverter

Turbo Operation

With this function, the air conditioner will maximize the output of cooling or heating capacity, make the room cool down or heat up rapidly, and attain the desired temperature in the shortest time.

Sleep Mode

This function enables the unit to automatically increase (cooling) or decrease (heating) 1° c per hour for the first two hours, then hold steady for the next 5 hours, after that the unit will stop operation. It can maintain the optimal temperature and save energy.

Remote Control

- Auto Restart Function
- Sleep Mode
- Two-Direction Airflow
- Active Carbon Filter
- Turbo Mode
- Independent Dehumidification
- LED Display
- Temp Compensation
- Self-diagnosis Function

QUÜL Inverter units includes aluminum coil.
Warranty of the unit is 1 year in electric parts and 5 years in Compressor. The warranty doesn't include corrosion and is subject to the manufacturer's recommendation for installation.

AIR CONDITION UNITS
12,000BTUs - 18,000BTUs
24,000BTUs

EVAPORATOR UNIT (INDOOR UNIT)

MODEL:			R.Q.9A12	R.Q.9A18	R.Q.9A24
Power Supply		Ph-V-Hz	1Ph, 220-230V~,60Hz	1Ph, 220-230V~,60Hz	1Ph, 220-230V~,60Hz
Cooling	Capacity	Btu/h	12000	18000	24000
	Input	W	1100	1650	2100
	Rate Current	A	5.5	7.5	9.5
	SEER	W/W	16	16	16
Moisture Removal			1.2	1.7	2.3
Max. Input Consumption			1900	2950	3200
Max. Current			8.5	13.5	14.5
Starting Current			----	----	----
Dimension (WxDxH)		in	31.10x7.79x10.43	36.14x8.8x11.5	36.14x8.8x11.5
Net Weight		lbs	19.84	25.35	34.17

OUTDOOR UNIT

MODEL:			R.Q.9A12.OUT	R.Q.9A18.OUT	R.Q.9A24.OUT
Outdoor Air Flow		m3/h	1900	2200	2700
Dimension (WxDxH)		in	30.71x9.83x21.26	29.92x11.22x23.23	32.27x13.19x27.36
Net Weight		lbs	63.93	81.57	98.11
Refrigerant Type		g	R410A/690g	R410A/980g	R410A/1180g
Design Pressure		MPa	4.2/1.5	4.2/1.5	4.2/1.5
Refrigerant Piping	Liquid Side / Gas Side		ø6.35/ø12.7(1/4"/1/2")	ø6.35/ø12.7(1/4"/1/2")	ø9.52/ø16(3/8"/5/8")
	Max. Refrigerant Pipe Lenght		20	20	25
	Max. Difference in Level		8	8	10

AIR CONDITION UNITS 30,000BTUs - 36,000BTUs

EVAPORATOR UNIT (INDOOR UNIT)

MODEL:			R.Q.L30	R.Q.L36
Power Supply		Ph-V-Hz	1Ph, 230V~, 60Hz	1Ph, 230V~, 60Hz
Cooling	Capacity	Btu/h	30,000	36,000
	SEER	W/W	16	14.5
Moisture Removal		L/h	3.0	3.8
Max. Circuit Capacity		A	15.0	25.0
Max. Fuse		A	20.0	30.0
Starting Current		A	----	----
Dimension (WxDxH)		in	56.86x10.91x13.39	56.86x10.91x13.39
Net Weight		lbs	57.32	57.32

OUTDOOR UNIT

MODEL:			R.Q.L30.OUT	R.Q.L36.OUT
Outdoor Air Flow		m3/h	30,000	38,000
Dimension (WxDxH)		in	35.438x12.40x36.863	38.98x13.58x40
Net Weight		lbs	180.78	180.78
Refrigerant Type		g	R410A/2540g	R410A/2750g
Design Pressure		MPa	550/340 PSIG	550/340 PSIG
Refrigerant Piping	Liquid Side / Gas Side		ø9.52/ø16(3/8"/5/8")	ø9.52/ø16(3/8"/5/8")
	Max. Refrigerant Pipe Lenght		25	25
	Max. Difference in Level		10	10

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Mark: MAVERICK

MAVERICK

US Serial Number:	86126916	**Application Filing Date:**	Nov. 22, 2013
US Registration Number:	4721139	**Registration Date:**	Apr. 14, 2015
Register:	Principal		
Mark Type:	Trademark		
TM5 Common Status Descriptor:	LIVE/REGISTRATION/Issued and Active The trademark application has been registered with the Office.		
Status:	A Sections 8 and 15 combined declaration has been accepted and acknowledged.		
Status Date:	Aug. 11, 2021		

Publication Date: May 27, 2014 **Notice of Allowance Date:** Jul. 22, 2014

Mark Information

Mark Literal Elements:	MAVERICK
Standard Character Claim:	Yes. The mark consists of standard characters without claim to any particular font style, size, or color.
Mark Drawing Type:	4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air-conditioning, air cooling and ventilation apparatus and instruments and components for air conditioning and cooling systems, namely, evaporative air coolers, all for industrial and commercial use

International Class(es):	011 - Primary Class	**U.S Class(es):**	013, 021, 023, 031, 034
Class Status:	ACTIVE		
Basis:	1(a)		
First Use:	Jun. 30, 2007	**Use in Commerce:**	Jun. 30, 2007

Basis Information (Case Level)

Filed Use:	No	**Currently Use:**	Yes
Filed ITU:	Yes	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Daikin Applied Americas Inc.

Owner Address: 13600 Industrial Park Blvd
Minneapolis, MINNESOTA UNITED STATES 55441

Legal Entity Type: CORPORATION

State or Country Where Organized: DELAWARE

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Tye Biasco

Docket Number: 1546.225US01

Attorney Primary Email Address: trademark@ptslaw.com

Attorney Email Authorized: Yes

Correspondent

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Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Aug. 11, 2021	NOTICE OF ACCEPTANCE OF SEC. 8 & 15 - E-MAILED	
Aug. 11, 2021	REGISTERED - SEC. 8 (6-YR) ACCEPTED & SEC. 15 ACK.	64591
Aug. 11, 2021	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	64591
Apr. 13, 2021	TEAS SECTION 8 & 15 RECEIVED	
Apr. 14, 2020	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Apr. 14, 2015	REGISTERED-PRINCIPAL REGISTER	
Mar. 10, 2015	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
Mar. 08, 2015	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Feb. 28, 2015	STATEMENT OF USE PROCESSING COMPLETE	76538
Jan. 21, 2015	USE AMENDMENT FILED	76538
Feb. 26, 2015	CASE ASSIGNED TO INTENT TO USE PARALEGAL	76538
Jan. 21, 2015	TEAS STATEMENT OF USE RECEIVED	
Jul. 22, 2014	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
May 27, 2014	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
May 27, 2014	PUBLISHED FOR OPPOSITION	
May 07, 2014	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Apr. 21, 2014	LAW OFFICE PUBLICATION REVIEW COMPLETED	68171
Apr. 21, 2014	ASSIGNED TO LIE	68171
Mar. 30, 2014	APPROVED FOR PUB - PRINCIPAL REGISTER	
Mar. 07, 2014	TEAS/EMAIL CORRESPONDENCE ENTERED	88889
Mar. 06, 2014	CORRESPONDENCE RECEIVED IN LAW OFFICE	88889
Mar. 06, 2014	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Jan. 30, 2014	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Jan. 30, 2014	NON-FINAL ACTION E-MAILED	6325
Jan. 30, 2014	NON-FINAL ACTION WRITTEN	83190
Jan. 24, 2014	ASSIGNED TO EXAMINER	83190
Dec. 06, 2013	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Nov. 26, 2013	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: TMEG LAW OFFICE 103 **Date in Location:** Aug. 11, 2021

Installation and Maintenance Manual IM 970-2

Group: **Applied Air Handling**
Part Number: **920102421-20**
Date: **May 2017**

Maverick® I

Heating & Cooling
Models MPSA03 – A05, 14 SEER
Models MPSH03 – H05, 15 SEER
3 to 5 Tons
R-410A Refrigerant

General

This manual contains the installation and operating instructions for your packaged rooftop unit. There are some precautions that should be taken to derive maximum satisfaction from it. Improper installation can result in unsatisfactory operation or dangerous conditions.

Read this manual and any instructions packaged with separate equipment prior to installation. Give this manual to the owner and explain its provisions. The owner should retain this manual for future reference.

This product line does have an optional DDC controller. For operation and information on using and programming the MicroTech® III unit controller, refer to the appropriate operation manual (see Table 1).

For a description of operation and information on using the keypad to view data and set parameters, refer to the appropriate program-specific operation manual (see Table 1).

Table 1: Operation, Installation and Maintenance Resources

Unit	Manual
Rooftop Unit Control Configuration	Operation Manual Bulletin Number
DDC Unit Controller	OM 1077
BACnet Communication Module	IM 1000
LonWorks Communication Module	IM 999

Checking Product Received

Upon receiving the unit, inspect for any damage from shipment. Claims for damage, either shipping or concealed, should be filed immediately with the shipping company.

Important: Check the unit model number, heating size, electrical characteristics, and accessories to determine if they are correct.

Hazardous Information Messages

⚠ DANGER

The manufacturer's warranty does not cover any damage or defect to the air conditioner caused by the attachment or use of any components, accessories or devices (other than those authorized by the manufacturer) into, onto, or in conjunction with the air conditioner. you should be aware that the use of unauthorized components, accessories or devices may adversely affect the operation of the air conditioner and may also endanger life and property. The manufacturer disclaims any responsibility for such loss or injury resulting from the use of such unauthorized components, accessories or devices.

⚠ WARNING

Provide adequate combustion and ventilation air to the unit space as specified in the combustion and ventilation air section of these instructions.

⚠ CAUTION

Install this unit only in a location and position as specified in the "Mechanical Installation" section of these instructions. Provide adequate combustion and ventilation air to the unit space as specified in the venting section of these instructions.

⚠ WARNING

Combustion products must be discharged outdoors. Connect this unit to an approved vent system only, as specified in "Mechanical Installation" section of these instructions.

⚠ NOTICE

Use only with type of gas approved for this unit. Refer to the unit rating plate.

⚠ DANGER

Never test for gas leaks with an open flame. It can cause an explosion or fire resulting in property damage, personal injury or death. Use a commercially available soap solution made specifically for the detection of leaks to check all connections, as specified in the "Mechanical Installation" section of these instructions.

⚠ NOTICE

Always install unit to operate within the unit's intended temperature-rise range with a duct system which has an external static pressure within the allowable range, as specified in the "Mechanical Installation" section of these instructions. See also unit rating plate.

⚠ DANGER

Units are not design certified to be installed inside the structure. Doing so can cause inadequate unit performance as well as property damage and carbon monoxide poisoning resulting in personal injury or death.

General

⚠ WARNING

When a unit is installed so that supply ducts carry air circulated by the unit to areas outside the space containing the unit, the return air shall also be handled by duct(s) sealed to the unit casing and terminating outside the space containing the unit.

Install this unit in accordance with The American National Standard Z223.1-latest edition manual entitled "National Fuel Gas Code," and the requirements or codes of the local utility or other authority having jurisdiction.

Additional helpful publications available from the "National Fire Protection Association" are: sNFPA-90A - Installation of Air Conditioning and Ventilating Systems 1985 or latest edition. NFPA-90B - Warm Air Heating and Air Conditioning Systems 1984.

These publications are available from:
National Fire Protection Association, Inc.
Batterymarch Park
Quincy, MA 02269

Major Components

The unit includes a hermetically-sealed refrigerating system (consisting of a scroll compressor, condenser coil, and evaporator coil with a thermal expansion valve), a circulation air blower, and a condenser fan. The cooling system of these units is factory-evacuated, charged and performance tested. Refrigerant amount and type are indicated on rating plate.

Heat options include natural gas fired furnace or a field installed electric resistance heater. The furnace assembly comes complete including a heat exchanger assembly, gas burner and control assembly, combustion air motor and fan, and all necessary internal electrical wiring.

Pre-Installation Check-Points

Before attempting any installation, carefully consider the following points:

A. Structural strength of supporting members (rooftop installation)

B. Clearances and provision for servicing power supply and wiring

C. Gas supply and piping

D. Air duct connections and sizing

E. Drain facilities and connections

F. Location for minimum noise and vibration - away from bedroom windows

Location Considerations

⚠ WARNING

This unit may be used to heat the building or structure during construction if the following installation requirements are met. Installation must comply with all installation instructions including:

- Proper vent installation
- Furnace operating under thermostatic control
- Return air duct sealed to the furnace
- Air filters in place
- Set furnace input rate and temperature rise per rating plate marking
- Means of providing outdoor air required for combustion
- Return air temperature maintained between 55°F (13°C) and 80°F (27°C)
- Installation of exhaust and combustion air inlet hoods completed
- Clean furnace, duct work and components upon substantial completion of the construction process, and verify furnace operating conditions including ignition, input rate, temperature rise and venting, according to the instructions.

The metal parts of this unit may be subject to rust or deterioration in adverse environmental conditions. This oxidation could shorten the equipment's useful life. Salt spray, fog or mist in seacoast areas, sulphur or chlorine from lawn watering systems, and various chemical contaminants from industries such as paper mills and petroleum refineries are especially corrosive.

If the unit is to be installed in an area where contaminants are likely to be a problem, give special attention to the equipment location and exposure.

1. Avoid having lawn sprinkler heads spray directly on the unit cabinet.
2. In coastal areas, locate the unit on the side of the building away from the waterfront.
3. Shielding by a fence or shrubs may give some protection.
4. Frequent washing of the cabinet, fan blade and coil with fresh water will remove most of the salt or other contaminants that build up on the unit.
5. Regular cleaning and waxing of the cabinet with a good automobile polish will provide some protection.
6. A good liquid cleaner may be used several times a year to remove matter that will not wash off with water.

Several different types of protective coatings are offered in some areas. These coatings may provide some benefit, but the effectiveness of such coating materials cannot be verified by the equipment manufacturer.

The best protection is frequent cleaning, maintenance, and minimal exposure to contaminants.

Outside Slab Installation

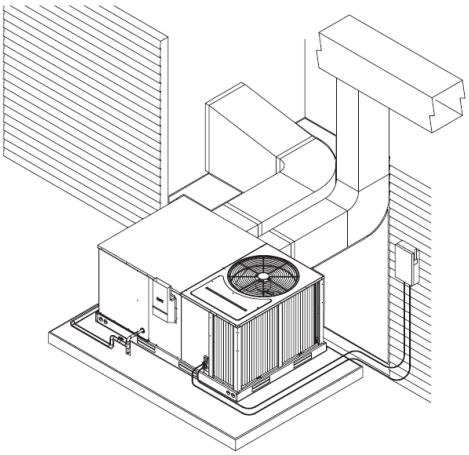
⚠ DANGER

These units are designed certified for outdoor installation only. Installation inside any part of a structure can result in inadequate unit performance as well as property damage. Installation inside can also cause recirculation of flue products into the conditioned space resulting in personal injury or death.

Typical outdoor slab installation is shown in Figure 1.

1. Select a location where external water drainage cannot collect around unit.
2. Provide a level slab sufficiently high enough above grade to prevent surface water from entering the unit
3. The location of the unit should be such as to provide proper access for inspection and servicing as shown in Figure 3 on page 6.
4. Locate unit where operating sounds will not disturb owner or neighbors.
5. Locate unit so roof runoff water does not pour directly on the unit. Provide gutter or other shielding at roof level. Do not locate unit in an area where excessive snow drifting may occur or accumulate.
6. Where snowfall is anticipated, the height of the unit above the ground level must be considered. Mount unit high enough to be above anticipated maximum area snowfall and to allow combustion air to enter the combustion air inlet.
7. Select an area which will keep the areas of the vent, air intake, and A/C condenser fins free and clear of obstructions such as weeds, shrubs, vines, snow, etc. Inform the user accordingly.
8. Remove compressor shipping supports (if so equipped) after installation.

Figure 1: Outside Slab Installation



Attaching Exhaust and Combustion Air Inlet Hoods

⚠ IMPORTANT

Do not operate this unit without the exhaust/ combustion air inlet hood properly installed. This hood is shipped in a carton in the blower compartment inside the unit and must be attached when the unit is installed. See Figure 29 on page 29.

To attach exhaust/combustion air inlet hood:

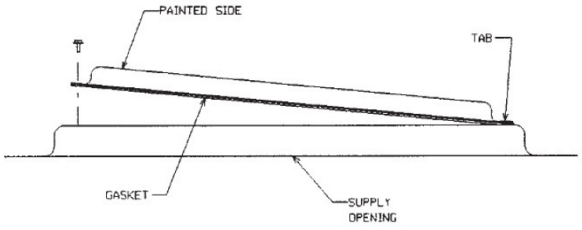
1. Remove screws securing blower access panel and remove access panel. For location of blower access panel, see Figure 28 on page 29.
2. Remove exhaust/combustion air inlet hood from the carton, located inside the blower compartment.
3. Attach blower access panel.
4. Attach the combustion air inlet/exhaust hood with screws. Reference Figure 29 on page 29 for proper location. Screws are in carton with the hood.
5. Vent the unit using the flue exhaust hood, as supplied from the factory, without alteration or addition.

Cover Panel Installation/ Conversion

Downflow to Horizontal

1. Remove the screws and covers from the outside of the supply and return sections.
2. Install the covers in the bottom supply and return openings with the painted side up (Figure 2). Use the existing gasket to seal the covers.
3. Secure the supply cover to the base of the unit with one screw, engaging prepunched tab in unit base.
4. Secure the return cover to the base of the unit with screws engaging prepunched holes in the unit base.

Figure 2: Cover Gasket Detail–Down-Flow to Horizontal



This unit is provided with 2 - 25" × 16" × 1" disposable filters. When replacing filters, ensure they are inserted fully to the back to prevent bypass.

Clearances

The following minimum clearances (Table 2) must be observed for proper unit performance and serviceability (also reference Figure 3).

NOTE: Supply duct may be installed with 0" clearance to combustible materials, provided 1" minimum Fiberglass insulation is applied either inside or outside of the duct.

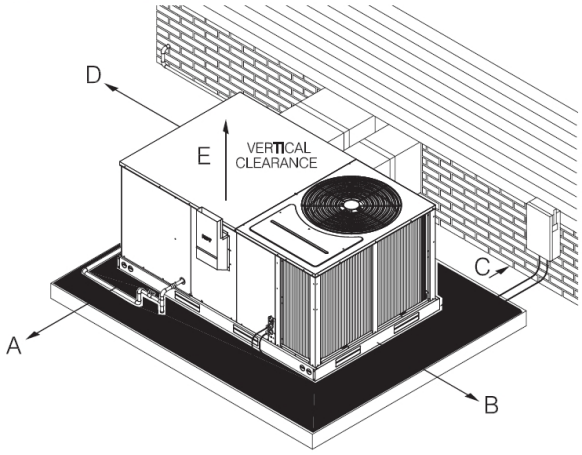
Rooftop Installation

⚠ NOTICE

If unit will not be put into service immediately, block off supply and return air openings to prevent excessive condensation.

1. Before locating the unit on the roof, make sure that the roof structure is adequate to support the weight involved (see "Unit Capacity and Physical Data" on page 25). THIS IS VERY IMPORTANT AND THE INSTALLER'S RESPONSIBILITY.
2. For rigging and roofcurb details, see Figure 5, Figure 6 and Figure 7.
3. The location of the unit on the roof should be such as to provide proper access for inspection and servicing.
4. Remove compressor shipping supports (if so equipped) after installation.

Figure 3: Clearances



Ductwork

⚠ DANGER

Never connect return ductwork to any other heat producing device such as fireplace insert, stove, etc. Unauthorized use of such devices may result in fire, carbon monoxide poisoning, explosion, personal injury, property damage or death.

The installing contractor should fabricate ductwork in accordance with local codes. Use industry manuals as a guide when sizing and designing the duct system. Contact Air Conditioning Contractors of America, 1513 16th St. N.W., Washington, D.C. 20036.

Place the unit as close to the conditioned space as possible allowing clearances as indicated. Run ducts as directly as possible to supply and return outlets. Use of non-flammable weatherproof flexible connectors on both supply and return connections at unit to reduce noise transmission is recommended.

On ductwork exposed to outside temperature and humidity, use a minimum of 2" of insulation and a vapor barrier. Distribution system in attic, furred space or crawl space should be insulated with at least 2" of insulation. ½" to 1" thick insulation is usually sufficient for ductwork inside the air conditioned space.

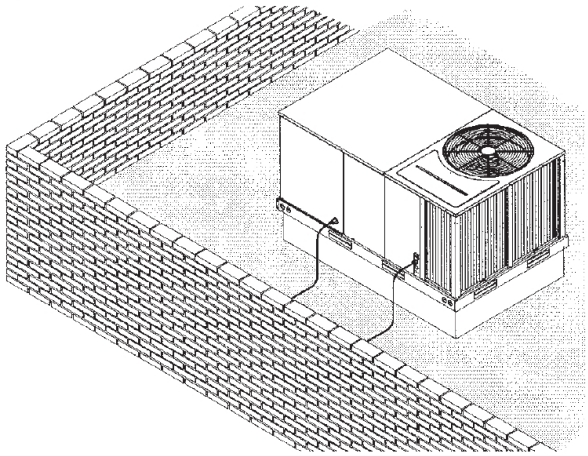
Provide balancing dampers for each branch duct in the supply system. Properly support ductwork from the structure.

Table 2: Recommended Clearances

Location	Clearance
A - Front	48"
B - Condenser Coil	18"
C - Duct Side	12"*
D - Evaporator End	36"
E - Above	60"

NOTE: *without Economizer. 57" with Economizer.

Figure 4: Unit Mounted on Roof Curb



Return Air

⚠ DANGER

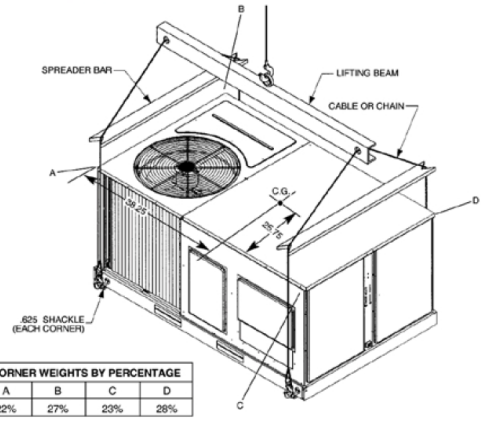
Never allow products of combustion or the flue products to enter the return air ductwork or the circulating air supply. All return ductwork must be adequately sealed and secured to the furnace with sheet metal screws and joints must be taped. All other duct joints must be secured with approved connections and sealed airtight.

Failure to prevent products of combustion from being circulated into the living space can create potentially hazardous conditions, including carbon monoxide poisoning that could result in personal injury or death.

In the event that the return air ducts must be run through an "unconfined" space containing other fuel burning equipment, it is imperative that the user be informed against future changes in construction which might change this to a "confined space." Also, caution the user against any future installation of additional equipment (such as power ventilators, clothes dryers, etc.) within the existing unconfined and/or confined space which might create a negative pressure within the vicinity of other solid, liquid, or gas fueled units.

Rigging and Roof Curb

Figure 5: Rigging Detail



CORNER WEIGHTS BY PERCENTAGE			
A	B	C	D
22%	27%	23%	28%

Figure 6: Roof Curb

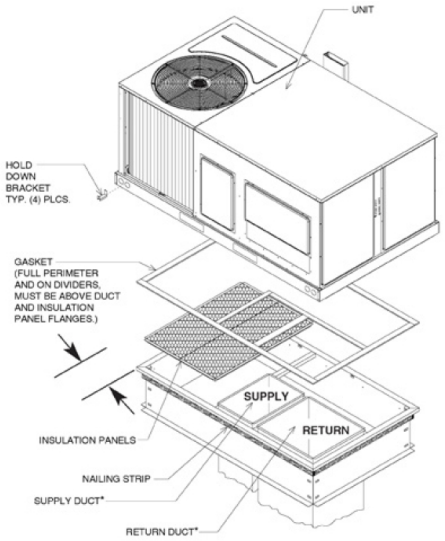
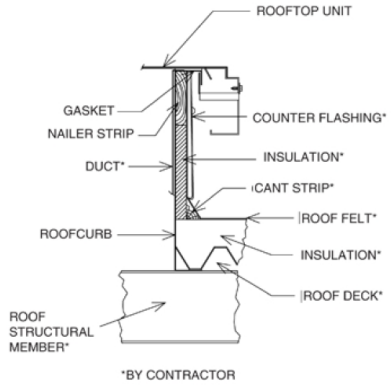


Figure 7: Roof Curb Detail



Gas Supply, Condensate Drain and Piping

Gas Connection

⚠ WARNING

Connect this unit only to gas supplied by a commercial utility.

⚠ DANGER

Never test for gas leaks with an open flame. It can cause an explosion or fire resulting in property damage, personal injury or death. Use a commercially available soap solution made specifically for the detection of leaks to check all connections, as specified in the "Mechanical Installation" section of these instructions.

⚠ CAUTION

Any additions, changes or conversions required for the furnace to satisfactorily meet the application should be made by a qualified installer, service agency or the gas supplier, using factory-specified or approved parts. In the commonwealth of Massachusetts, installation must be performed by a licensed plumber or gas fitter for appropriate fuel.

⚠ CAUTION

Disconnect the furnace and its individual shutoff valve from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 pound per square inch gauge or isolate the system from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of this gas supply system at pressures equal to or less than 1/2 PSIG.

⚠ NOTICE

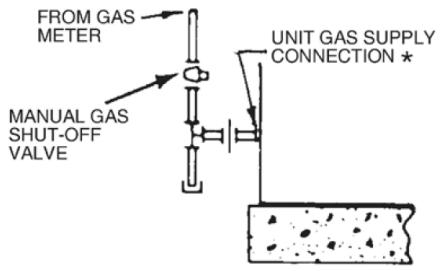
Check the rating plate to make certain the unit is equipped to burn the type of gas supplied. Care should be taken after installation of this equipment that the gas control valve not be subjected to high gas supply line pressure.

1. Install gas piping in accordance with local codes and regulations of the local utility company. In the absence of local codes, the installation must conform to the specifications of the National Fuel Gas Code, ANSI Z223. 1 - latest edition.
2. Connect the gas line to the gas pipe inlet opening provided into the ½" inlet valve. See Figure 1 on page 5 or Figure 4 on page 6 for typical piping.
3. Size the gas line to the furnace adequate enough to prevent undue pressure drop and never less than ½".
4. Install a drip leg or sediment trap in the gas supply line as close to the unit as possible.
5. Install an outside ground joint union to connect the gas supply to the control assembly at the burner tray.
6. Gas valves have been factory installed. Install a manual gas valve where local codes specify a shut-off valve outside the unit casing (see Figure 8).
7. Make sure piping is tight. A pipe compound resistant to the action of liquefied petroleum gases must be used at all threaded pipe connections.

NOTE: The use of flexible gas connectors is not permitted.

The Commonwealth of Massachusetts requires the gas shut-off valve to be a T-handle gas lock.

Figure 8: Suggested Gas Piping



*Factory supplied grommet must be utilized.

Table 3: Gas Pipe Capacity Table (Cu. Ft./Hr.)

Nominal Iron Pipe	Equivalent Length of Pipe, Feet							
Size	10	20	30	40	50	60	70	80
1/2"	132	92	73	63	56	50	46	43
3/4"	278	190	152	130	115	105	96	90
1"	520	350	285	245	215	195	180	170
1-1/4"	1,050	730	590	500	440	400	370	350
1-1/2"	1,600	1,100	890	760	670	610	560	530

In making gas connections, avoid strains as they may cause noise and damage the controls. A backup wrench is required to be used on the valve to avoid damage.

The capacities of gas pipe of different diameters and lengths in cu. ft. per hr. with pressure drop of 0.3 in. and specific gravity of 0.60 (natural gas) are shown in Table 3.

After determining the pipe length, select the pipe size which will provide the minimum cubic feet per hour required for the gas input rating of the furnace. By formula:

$$\textit{Cu. Ft. Per Hr. Required} = \frac{\textit{Gas Input of Furnace (BTU/Hr.)}}{\textit{Heating Value of Gas (BTU/Ft.)}}$$

The gas input of the furnace is marked on the furnace rating plate. The heating value of the gas (BTU/FT^3) may be determined by consulting the local natural gas utility or the L.P. gas supplier.

LP Conversion

⚠ DANGER

This unit is equipped at the factory for use with natural gas only. Conversion to LP gas requires a special kit supplied by the distributor or manufacturer. Mailing addresses are listed on the furnace rating plate, parts list and warranty. Failure to use the proper conversion kit can cause fire, carbon monoxide poisoning, explosion, personal injury, property damage, or death.

⚠ NOTICE

To remove the gas valve, remove the four screws securing the manifold pipe to the burner tray. Remove the manifold pipe with gas valve attached. See Figure 10.

Convert the valve to use liquefied petroleum (LP) gas by replacing the pressure regulator spring with the conversion kit spring. This LP kit spring allows the regulator to maintain the proper manifold pressure for LP gas. The correct burner LP orifices are included in the kit. See Figure 9.

NOTE: Order the correct LP conversion kit from the furnace manufacturer. See Conversion Kit Index shipped with unit for proper LP kit number. Furnace conversion to LP gas must be performed by a qualified technician.

NOx Models

When converting units equipped with NOx inserts to LP gas, the stainless steel screen mesh inserts in the entrance of the tubular exchangers are not required to meet SCAQMD NOx emission levels. These inserts and 1/8" diameter retaining rod should be carefully removed before firing this furnace on LP gas. **Important:** This furnace is not designed to operate on LP gas with the NOx inserts in place.

Step by step instructions on removing the NOx inserts and retaining rod are included in the Conversion Kit Installation Instructions.

Table 4: LP Gas Pipe Capacity Table (Cu. Ft./Hr.)

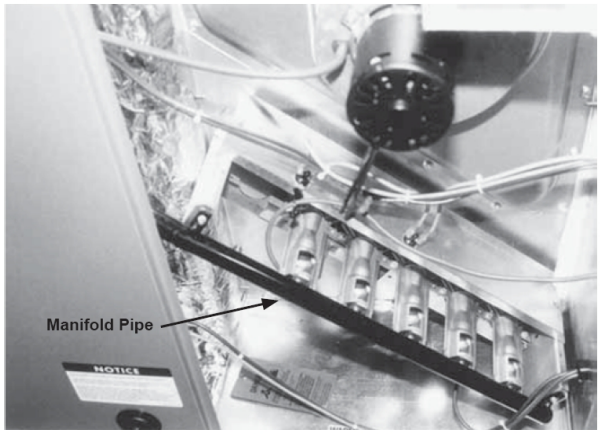
Maximum capacity of pipe in thousands of BTU/hour of undiluted liquified petroleum gases at 11 inches water column inlet pressure (Based on a pressure drop of 0.5 inch water column).

Nominal Iron Pipe Size (in.)	Length of Pipe (ft.)											
	10	20	30	40	50	60	70	80	90	100	125	150
1/2	275	189	152	129	114	103	96	89	83	78	69	63
3/4	567	393	315	267	237	217	196	182	173	162	146	132
1	1071	732	590	504	448	409	378	346	322	307	275	252
1-1/4	2205	1496	1212	1039	913	834	771	724	677	630	567	511
1-1/2	3307	2299	1858	1559	1417	1275	1181	1086	1023	976	866	787
2	6221	4331	3465	2992	2646	2394	2205	2047	1921	1811	1606	1496

Example (LP): Input BTU requirement of unit, 150,000
Equivalent lenght of pipe, 60 ft. = 3/4" IPS required

Figure 9: NOx Inserts

Figure 10: Manifold Pipe



Adjusting or Checking Furnace Input

- Natural Gas Line Pressure 5" – 10.5" W.C.
- LP Gas Line Pressure 11" – 13" W.C.
- Natural Gas Manifold Pressure – 3.5" W.C
- LP Gas Manifold Pressure – 10" W.C.

Supply and manifold pressure taps are located on the gas valve body ⅛" N.P.T. and on the manifold.

Use a properly calibrated manometer gauge for accurate gas pressure readings.

Only small variations in the gas flow should be made by means of the pressure regulator adjustment. Furnaces functioning on LP gas must be set by means of the tank or branch supply regulators. The furnace manifold pressure should be set at 10" W.C. at the gas control valve.

To adjust the pressure regulator, remove the regulator cap and turn the adjustment screw clockwise to increase pressure or counterclockwise to decrease pressure. **Then replace the regulator cap securely.**

Any necessary major changes in the gas flow rate should be made by changing the size of the burner orifices. To change orifice spuds, shut off the manual main gas valve and remove the gas manifold.

For elevations up to 2,000 feet, rating plate input ratings apply. For high altitudes (elevations over 2,000 ft.), contact Daikin Applied Parts.

Check of input is important to prevent over-firing of the furnace beyond its design-rated input. NEVER SET INPUT ABOVE THAT SHOWN ON THE RATING PLATE. Use the following table or formula to determine input rate.

$$\text{Cu. Ft. Per Hr. Required} = \frac{\text{Heating Value of Gas (BTU/Cu. Ft.)} \times 3600}{\text{Time in Seconds (for 1 Cu. Ft.) of Gas}}$$

Start the furnace and measure the time required to burn one cubic foot of gas. Prior to checking the furnace input, make certain that all other gas units are shut off, with the exception of pilot burners. Time the meter with only the furnace in operation.

Important note for altitudes above 2,000 feet (610 meters): The main burner orifices in your furnace and in these kits are sized for the nameplate input and intended for installations at elevations up to 2,000 feet in the USA or Canada, or for elevations of 2,000 – 4,500 feet (610 – 1,373 meters) in Canada if the unit has been derated at the factory. For elevations above 2,000 feet (610 meters) **in the USA only** (see ANSI-Z223.1), the burner orifices must be sized to reduce the input 4% for each 1,000 feet (305 meters) above sea level.

Table 5: Meter Times

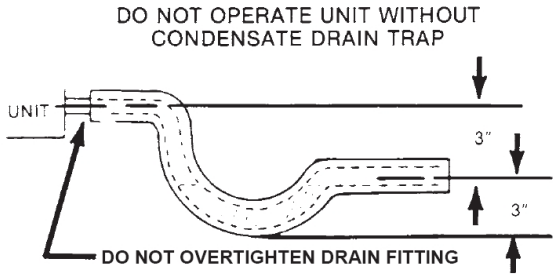
Meter time, in minutes and seconds, for normal input rating of furnaces equipped for natural or LP gas						
Input BTU/hr	Meter Size Cu.Ft.	Heating value of gas BTU per cu. ft.				
		900	1000	1040	1100	2500
40,000	1	1:21	1:30	1:34	1:39	3:45
	10	13:30	15:00	15:36	16:30	37:30
60,000	1	0:54	1:00	1:03	1:06	2:30
	10	9:00	10:00	10:24	11:00	25:00
80,000	1	0:41	0:45	0:47	0:50	1:53
	10	6:45	7:30	7:48	8:15	18:45
100,000	1	0:33	0:36	0:38	0:40	1:30
	10	5:24	6:00	6:15	6:36	15:00

Important notice: Derating of the heating input for high altitude in the field is unlawful in Canada (refer to CAN/ CGA 2.17). Units installed in altitudes greater than 2,000 feet (610 meters) must be shipped from the factory or from a factory authorized conversion station with the heating input derated by 10% so as to operate properly in altitudes from 2,000 – 4,500 feet (610 – 1,373 meters).

Condensate Drain

The condensate drain connection of the evaporator is threaded ¾" nominal P.V.C. pipe. Install a condensate trap to ensure proper condensate drainage (Figure 11)

Figure 11: Condensate Drain



Power Supply

⚠ DANGER

Power supply to the unit must be disconnected before making field connections. To avoid electrical shock, personal injury or death, be sure to rigorously adhere to field wiring procedures regarding proper lockout and tagout of components.

⚠ NOTICE

This unit is approved for use with copper conductors only connected to unit contactor. Warranty may be jeopardized if aluminum wire is connected to unit contactor.

Special instructions apply for power wiring with aluminum conductors: Warranty is void if connections are not made per instructions.

1. **All wiring should be made in accordance with the National Electrical Code.** Consult the local power company to determine the availability of sufficient power to operate the unit. Check the voltage at power supply to make sure it corresponds to the unit's RATED VOLTAGE REQUIREMENT. Install a branch circuit disconnect (refer to Figure 12 and Figure 13) near the rooftop, in accordance with the N.E.C., C.E.C. or local codes. A bracket is provided with the unit for mounting of the disconnect.
2. It is important that proper electrical power is available at the unit. Voltage should not vary more than 10% from that stamped on the unit nameplate. On three phase units, phases must be balanced within 3%.
3. For branch circuit wiring (main power supply to unit disconnect), the minimum wire size for the length of run can be determined from Table 6 using the circuit ampacity found on the unit rating plate. Use the smallest wire size allowable from the unit disconnect to the unit.
4. For through the base wiring entry, all fittings and conduit are field supplied for this application (Figure 14 on page 12). Reference Table 8 on page 13 for proper hole and conduit size.

Figure 12: Recommended Branch Circuit Disconnect Location – Gas Heat Units

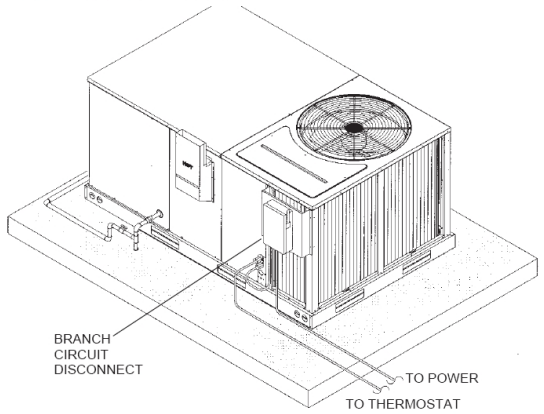


Figure 13: Recommended Branch Circuit Disconnect Location – Electric Heat or Cooling Only Units

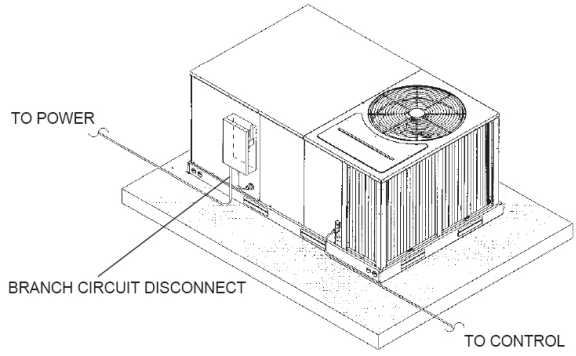


Table 6: Branch Circuit Copper Wire Size (Based on 1% Voltage Drop)*

Supply Wire Length (ft.)	Branch Circuit Ampacity							
	15	20	25	30	35	40	45	50
50	14	12	10	10	8	8	6	6
100	10	8	8	6	6	6	4	4
150	8	6	6	4	4	4	3	3
200	6	4	4	4	3	3	2	2

* Credit: National Electric Code

NOTE: Wire size based on 60°C rated wire insulation and 30°C ambient temp. (86°F).

For more than 3 conductors in a raceway or cable, see the N.E.C. for derating the ampacity of each conductor.

When installed, the unit must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, if an external electrical source is utilized.

Attach a length (6" or more) of recommended size copper wire to the unit contactor terminals L1 and L3 for single phase, L1, L2 and L3 for three phase.

Select the equivalent aluminum wire size from the tabulation Table 7.

Table 7: Equivalent Aluminum Wire Size

AWG Copper Wire Size	AWG Aluminum Wire Size	Connector Type and Size (or equivalent)
#12	#10	T & B Wire Nut PT2
#10	#8	T & B Wire Nut PT3
#8	#6	Sherman Split Bolt TSP6
#6	#4	Sherman Split Bolt TSP4
#4	#2	Sherman Split Bolt TSP2

Splice copper wire pigtails to aluminum wire with U.L. recognized connectors for copper-aluminum splices. Please exercise the following instructions very carefully to obtain a positive and lasting connection:

1. Strip insulation from aluminum conductor.
2. Coat the stripped end of the aluminum wire with the recommended inhibitor, and wire brush the aluminum surface through inhibitor. INHIBITORS: Brundy-Pentex "A"; Alcoa-No. 2EJC; T & B-KPOR Shield.
3. Clean and re-coat aluminum conductor with inhibitor.
4. Make the splice using the above listed wire nuts or split bolt connectors.
5. Coat the entire connection with inhibitor and wrap with electrical insulating tape.

Figure 14: Electrical Conduit Installation

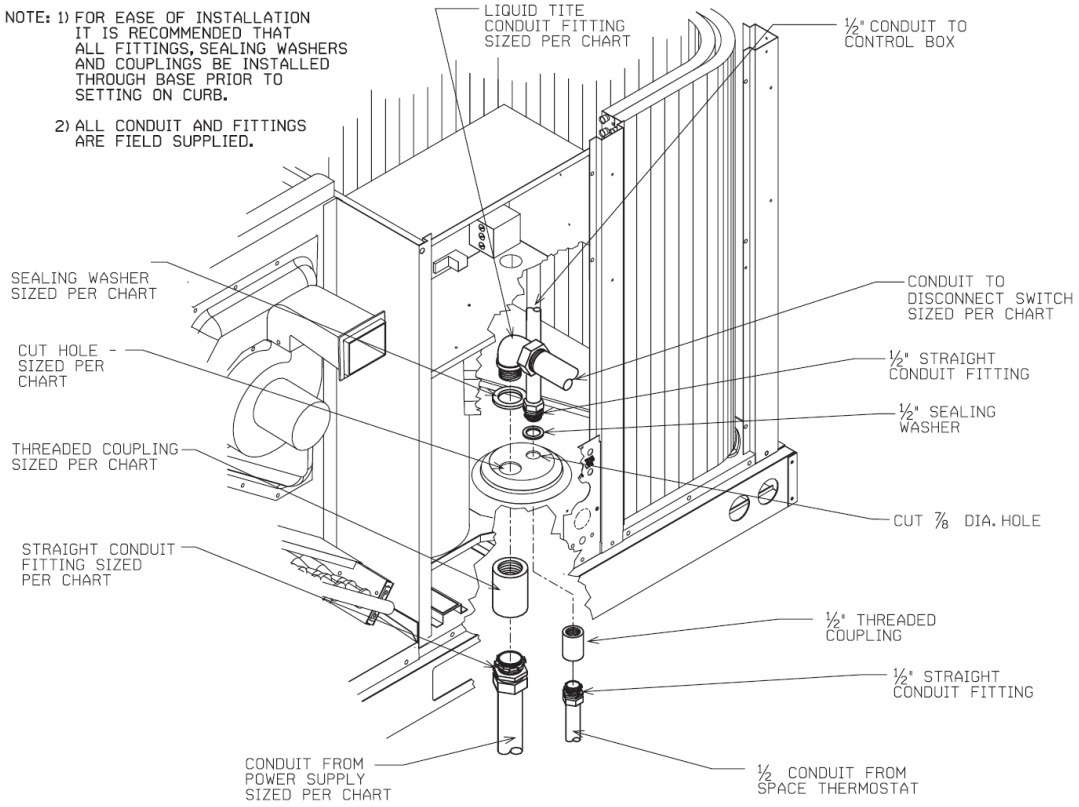


Table 8: Recommended Wire Sizes For Given Conduit and Hole Size

Wire Size, AWG	14	12	10	8	6	4	3	2	1	0	00	000
Conduit Size	1/2"	1/2"	1/2"	3/4"	1"	1"	1-1/4"	1-1/4"	1-1/2"	1-1/2"	2"	2"
Hole Size	7/8"	7/8"	7/8"	1-31/32"	1-23/64"	1-23/64"	1-23/32"	1-23/32"	1-31/32"	1-31/32"	2-15/32"	2-15/32"

Hook-Up

To wire unit, refer to the following hook-up diagram. Refer to Figure 27 on page 29 and Figure 14 for location of wiring entrances.

Wiring to be done in the field between the unit and devices not attached to the unit, or between separate devices which are field installed and located, shall conform with the temperature limitation for Type T wire [63°F rise (35°C)] when installed in accordance with the manufacturer's instructions.

Internal Wiring

⚠ NOTICE

Some single phase units are equipped with a single pole contactor. Caution must be exercised when servicing as only one leg of the power supply is broken with the contactor.

Some models are equipped with electronically commutated blower motors which are constantly energized, unless the main unit disconnect is in the OFF position.

A diagram of the internal wiring of this unit is located under the electrical box cover and this manual. If any of the original wire as supplied with the unit must be replaced, the wire gauge and insulation must be same as original wiring.

Transformer is factory wired for 230 volts on 208/230 volt models and must be changed for 208 volt applications. See unit wiring diagram for 208 volt wiring.

Customer Supplied Thermostat

The customer supplied room thermostat must be compatible with the spark ignition control on the unit. Generally, all thermostats that are not of the "current robbing" type are compatible with the integrated furnace control. The low voltage wiring should be sized as shown in Table 9.

Table 9: Field Wire Size for 24 Volt Thermostat Circuits

	Solid Copper Wire – AWG.					
3.0	16	14	12	10	10	10
2.5	16	14	12	12	12	10
2.0	18	16	14	12	12	10
	50	100	150	200	250	300
	Length of Run – Feet[a]					

a. The total wire length is the distance from the furnace to the thermostat and back to the furnace.

NOTE: Do not use control wiring smaller than No. 18 AWG.

Install the room thermostat in accordance with the instruction sheet packed in the box with the thermostat. See Figure 16 for an example of a typical customer supplied wiring diagram.

Optional Factory Supplied Thermostat

The optional factory supplied, touch screen, commercial setback digital thermostat (Figure 15) uses microcomputer technology to provide precise time and temperature control. This thermostat offers the flexibility to design heating and cooling programs that fit building needs (Table 10). This thermostat is adaptable to most residential 24 volt forced air multi-stage systems with electric or fossil fuel auxiliary and is the ultimate for comfort, convenience, and performance. See Figure 17 for an optional factory supplied thermostat wiring diagram.

Figure 15: Optional Thermostat

Table 10: Optional Factory Supplied Thermostat Specifications

Electrical Rating Single Stage:	mV to 30 V (ac), NEC Class II, 50/60 Hz or DC
Electrical Rating Staging:	20 to 30 V (ac), NEC Class II
Terminal Load:	1.5 A per terminal, 2.5 A max. combined
Setpoint Range:	45° to 99°F (7° to 37°C)
Anticipation, Heating:	Adjustable
Anticipation, Cooling:	Adjustable
Rated Differential Single Stage:	Heat 0.6°F, Cool 1.2°F
Rated Differential Staging:	Heat 0.6°F, Cool 1.2°F
Operating Ambient:	32° to +105°F (0° to +41°C)
Operating Humidity:	90% non-condensing max.
Shipping Temperature Range:	-4° to 150°F (-20° to 65°C)
Dimensions (H × W × D):	4.6" × 5.9" × 1.2"

Table 11: Thermostat Terminal Functions

Y2	2nd Stage Compressor
Y	Compressor Relay
G	Fan Relay
RC	Power for Cooling
RH	Power for Heating
C	Common wire from secondary side of cooling (Optional). Required for fault indication, continuous backlight operation or remote temperature sensor operation
L	Malfunction indicator for systems with malfunction connection
W/E	Heat Relay/Emergency Heat Relay (Stage 1)
W2	2nd Stage Heat (3rd Stage Heat in HP2)
Blank	Blank
-	Common (DC) for wired remote temperature sensor
S	Frequency signal from remote temperature sensor
+	Power (DC) to remote temperature sensor

Figure 16: Typical Customer Supplied Thermostat Wiring Diagram

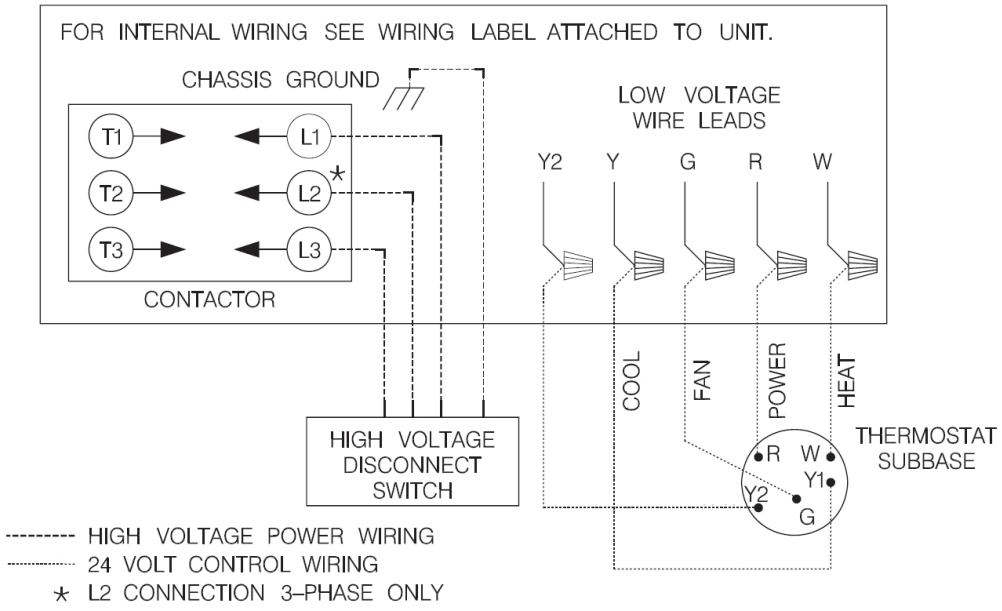
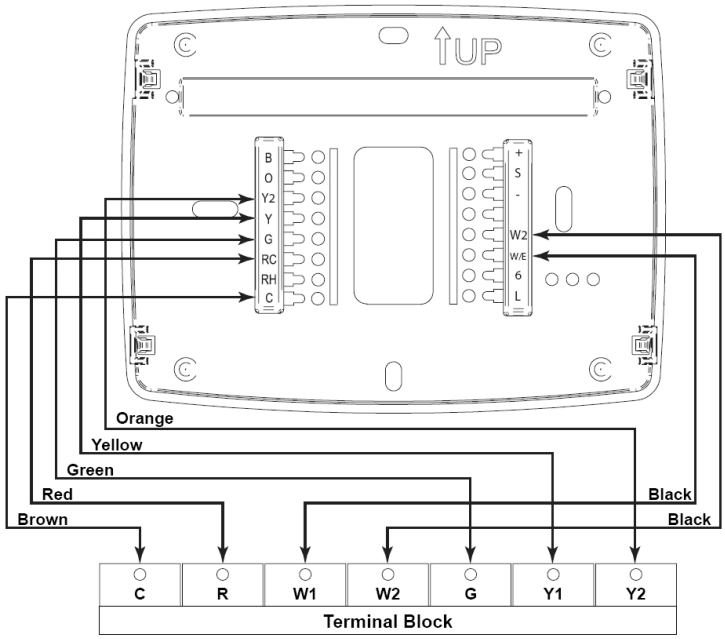


Figure 17: Optional Factory Supplied 7-170 Thermostat Wiring Diagram



1. On 3 to 5 ton units, a terminal block is not supplied. Use a wirenut to extend from the leads provided in the unit to the thermostat. W1, W2, and Y2 are optional depending upon the size and selected options of the unit. Colors shown above are typical for the MPS I.
2. For wiring with DDC control option, see OM 1077 for wiring instructions.

Figure 18: Wiring Diagram: MPS A03C to A04C, 208/230 Volt

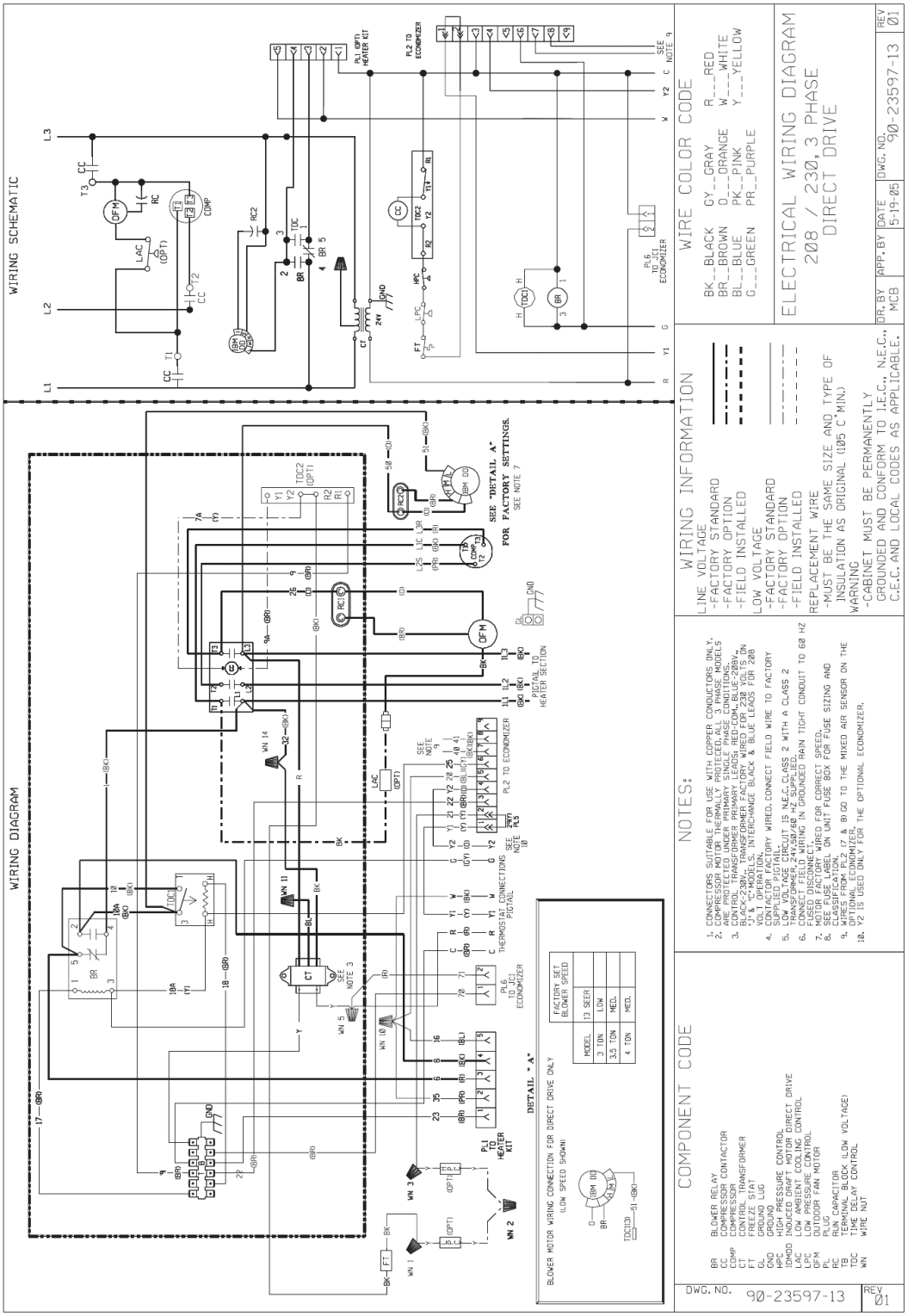


Figure 19: Wiring Diagram: MPS A03C to A04C, 460 Volt

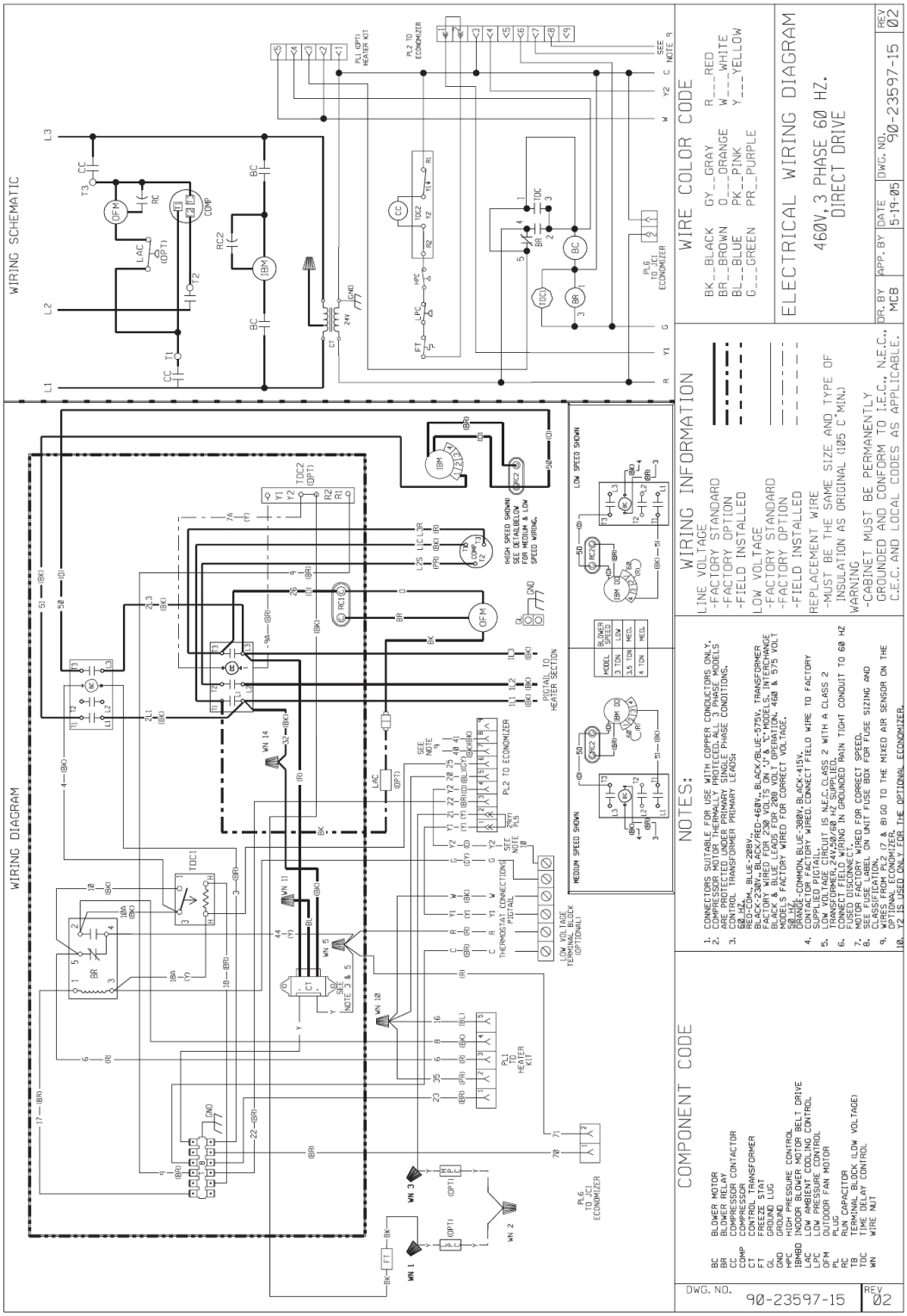


Figure 20: Wiring Diagram: MPS A03C to A04C with Gas Heat

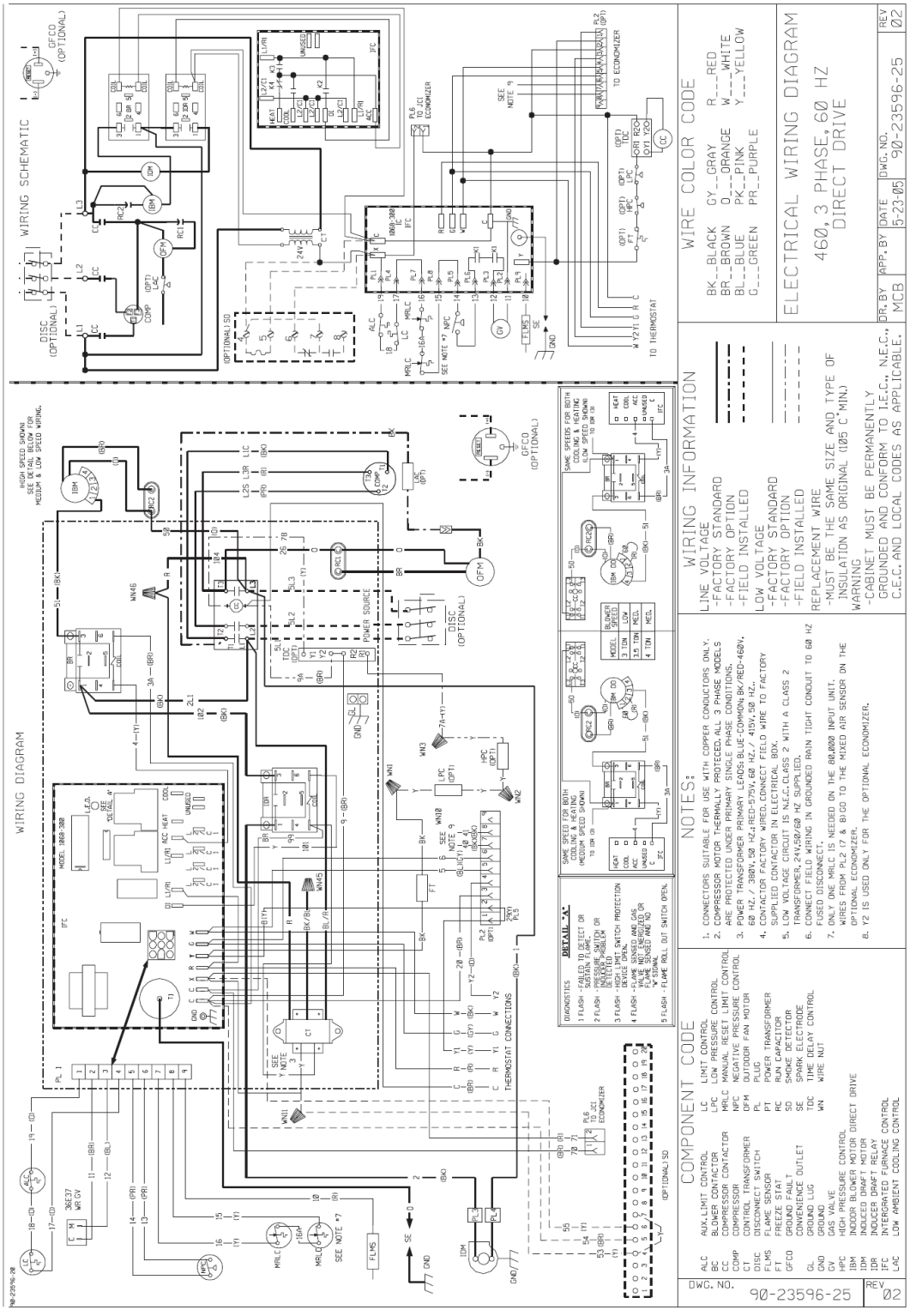


Figure 21: MPS A03C to A05C, 208-230/460V, 3Ø, Gas Heat

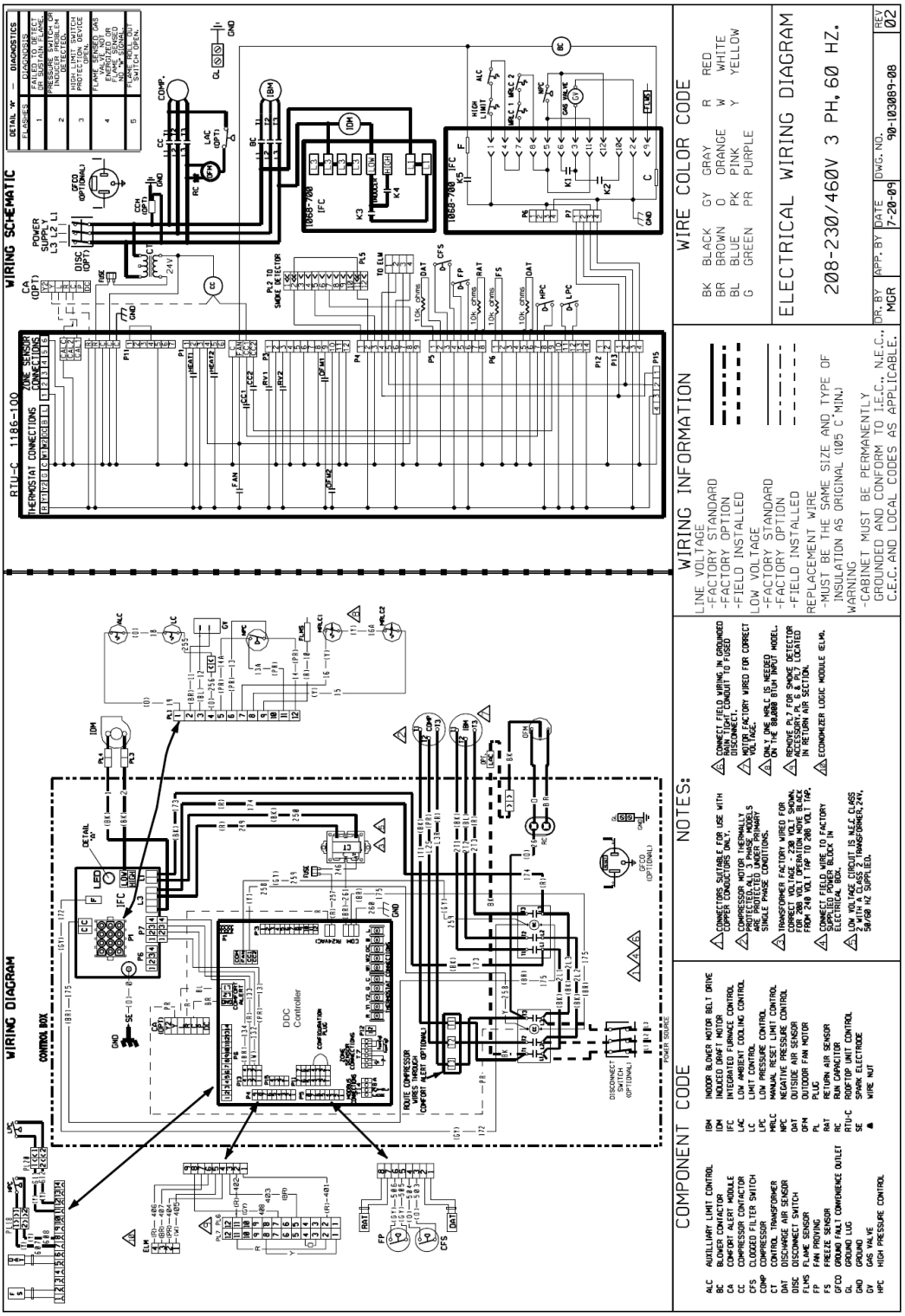


Figure 22: MPS A03C to A05C, 208-230/460V, 3Ø, Cooling Only

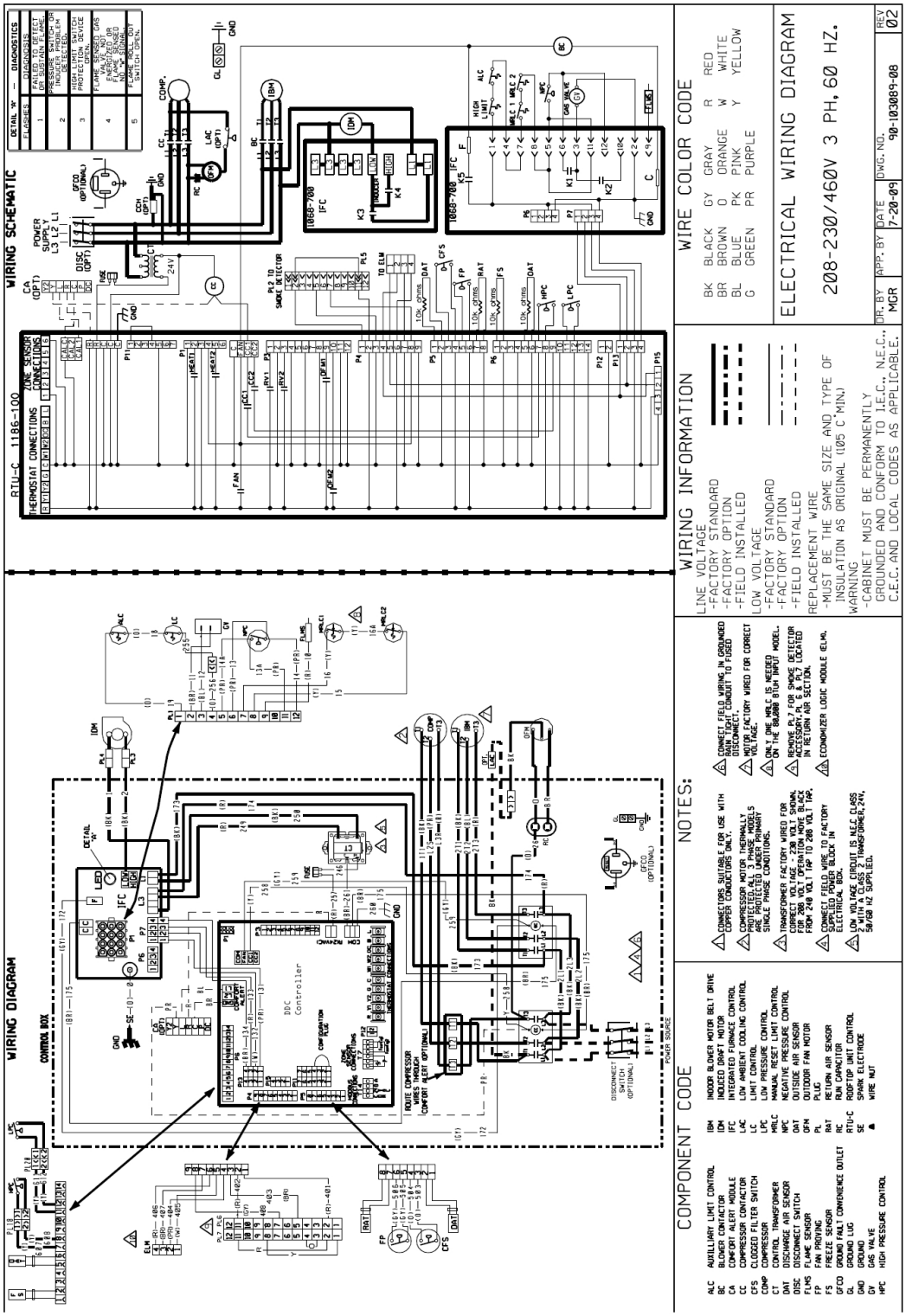


Figure 23: Wiring Diagram: MPS A05C

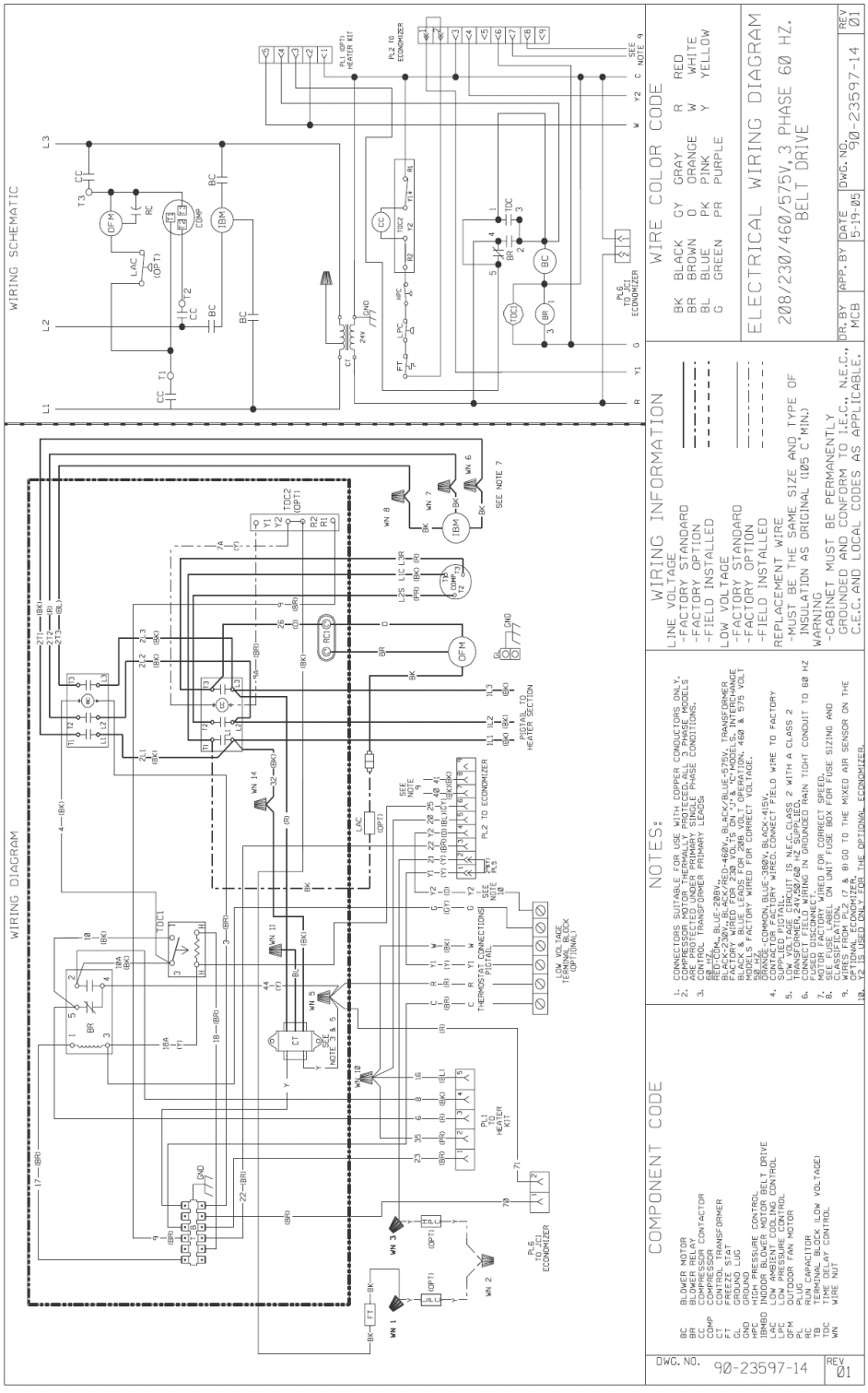


Figure 24: Wiring Diagram: MPS A05C with Gas Heat, 208/230 Volt, Belt Drive

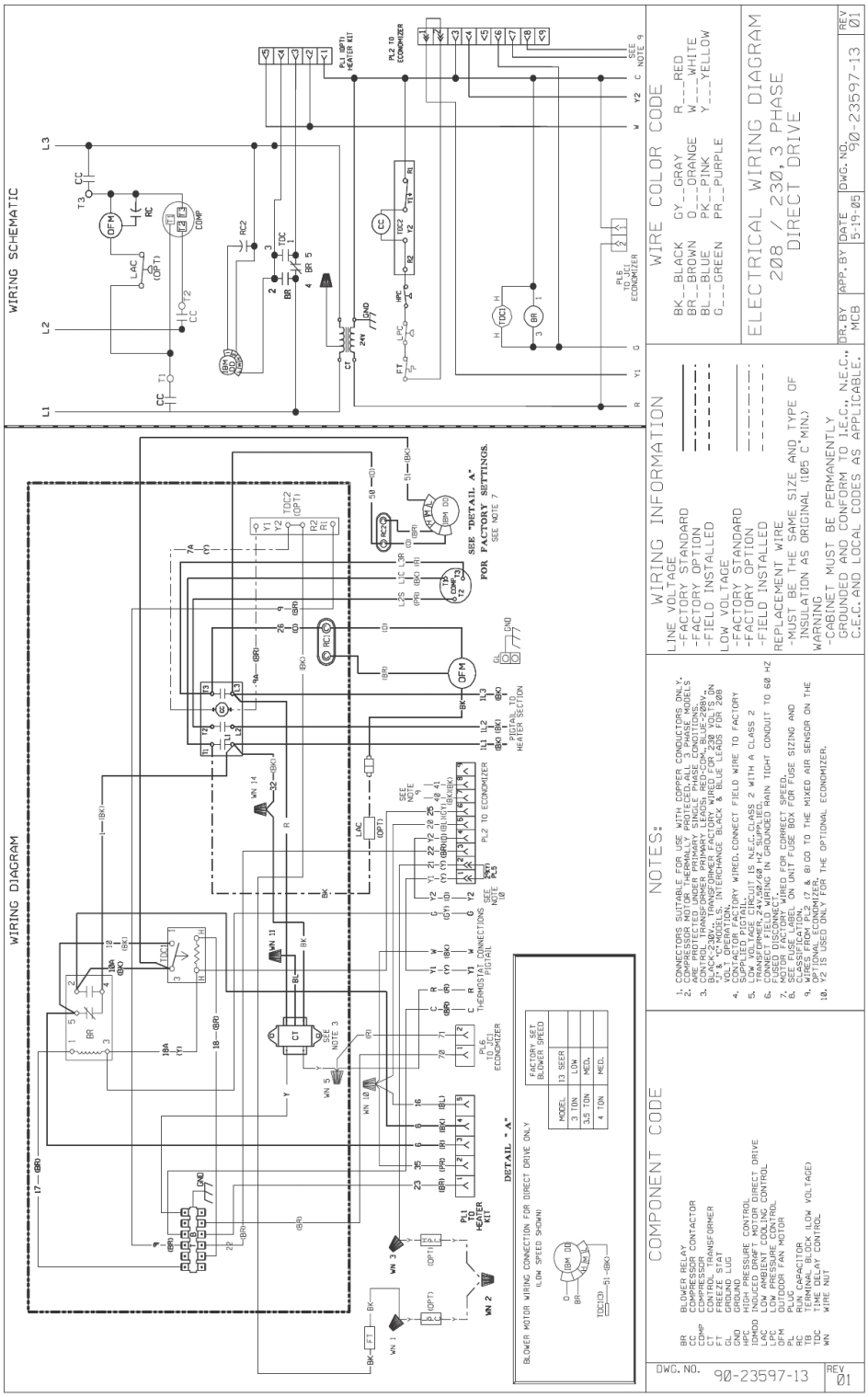


Figure 25: Wiring Diagram: MPS A05C with Gas Heat, 208/230 Volt, Direct Drive

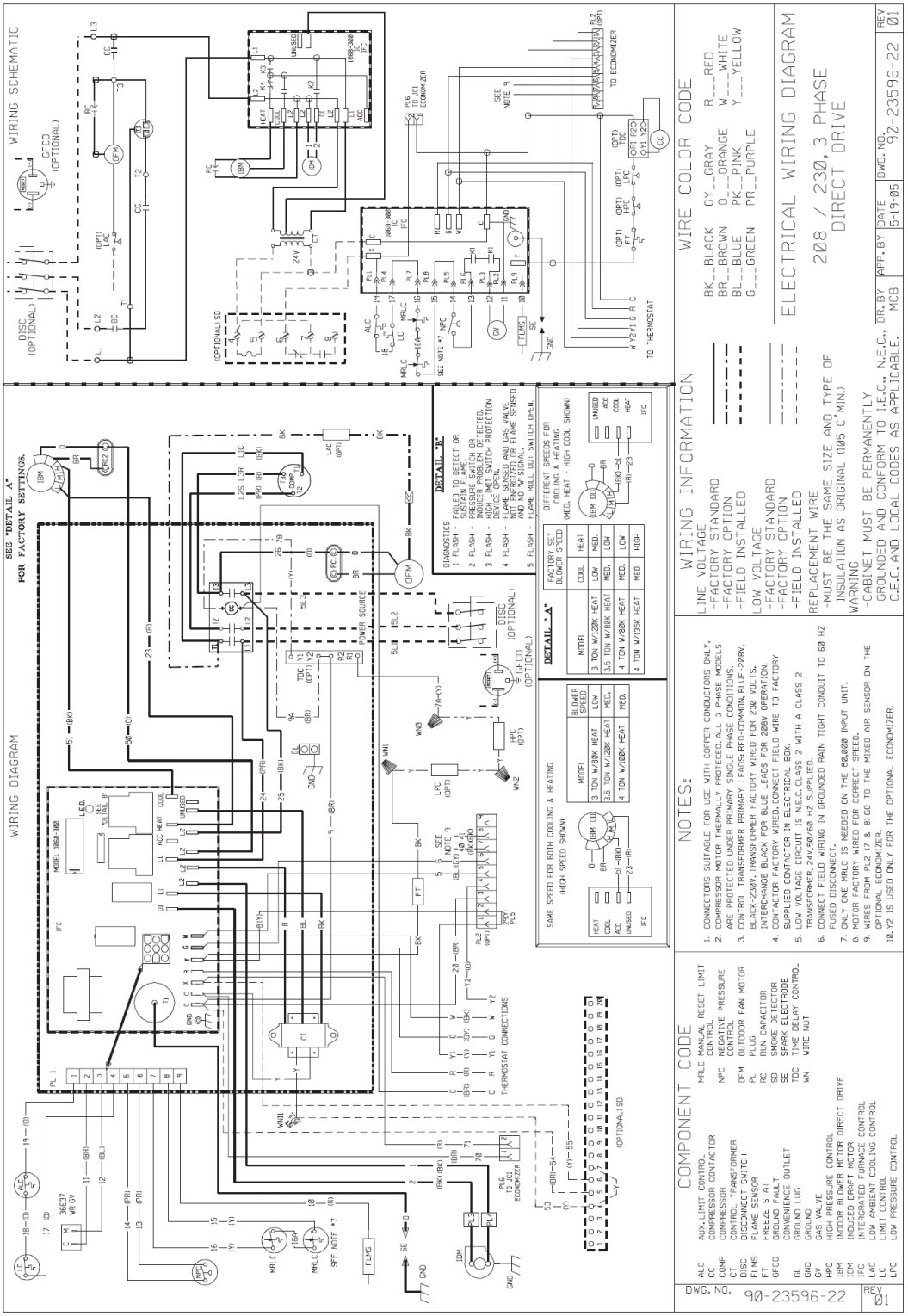
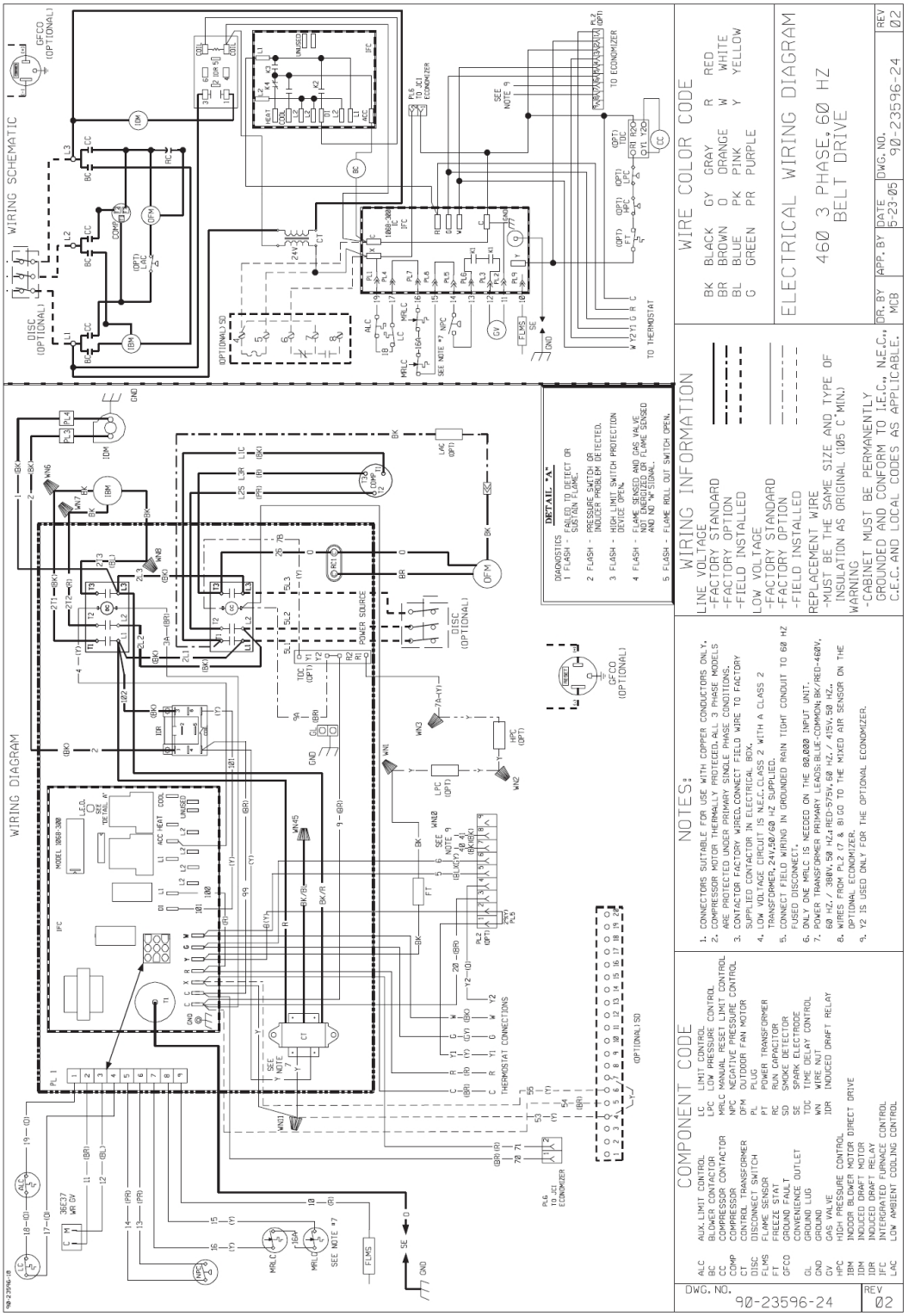


Figure 26: Wiring Diagram: MPS A05C with Gas Heat, 460 Volt, Belt Drive



Unit Capacity and Physical Data

Table 12: MPS A03C – A05C

Model	A03C	A04C	A05C
Cooling Performance[1]			
Gross Cooling Capacity Btu (kW)	36,200 (10.61)	48,000 (14.06)	60,00 (17.58)
EER/SEER[2]	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM (L/s)	1200/1250 (566/590)	1600/1500 (755/708)	2000/1800 (944/849)
AHRI Net Cooling Capacity Btu (kW)	34,600 (10.14)	46,000 (13.48)	58,500 (17.14)
Net Sensible Capacity Btu (kW)	25,300 (7.41)	34,000 (9.96)	41,700 (12.22)
Net Latent Capacity Btu (kW)	9,300 (2.72)	12,000 (3.52)	17,500 (5.13)
Net System Power kW	2.95	3.93	4.95
Compressor			
No./Type	1/Scroll	1/Scroll	1/Scroll
Gas Heating Performance			
AFUE %	80	80	80
Steady stage efficiency %	81	81	81
No. stages	1	1	1
Gas connection size	1/2"	1/2"	1/2"
Heating input (BtuH) low/medium/high	80,000/120,000	80,000/100,000/135,000	100,000/135,000
Heating output (BtuH)	64,800/97,200	64,800/81,000/109,400	81,000/109,400
Temperature rise °F	30–80	30–80	30–70
Sound[4]			
Outdoor Rating (dB)	78	78	83
Outdoor Coil			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth in. (mm)	0.7 (18)	0.7 (18)	0.7 (18)
Face Area sq. ft. (sq. m)	13.9 (1.29)	16.4 (1.52)	16.4 (1.52)
Rows / FPI (FPcm)	1 / 23 (9)	1 / 23 (9)	1 / 23 (9)
Indoor Coil - Fin Type			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth in. (mm)	1 (25)	1.3 (32)	1.3 (32)
Face Area sq. ft. (sq. m)	4.8 (0.45)	4.8 (0.45)	4.8 (0.45)
Rows / FPI (FPcm)	1/20 (8)	1/20 (8)	1/20 (8)
Refrigerant Control	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. (mm)	1/0.75 (19.05)	1/0.75 (19.05)	1/0.75 (19.05)
Outdoor Fan			
Type	Propeller	Propeller	Propeller
No. Used/Diameter in. (mm)	1/24 (609.6)	1/24 (609.6)	1/24 (609.6)
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM (L/s)	3680 (1737)	3680 (1737)	3930 (1855)
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075
Indoor Fan			
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. (mm)	1/10×10 (254×254)	1/10×10 (254×254)	1/11×10 (279×254)
Drive Type/No. Speeds	Direct/1 or Belt/Adjustable	Direct/1 or Belt/Adjustable	Belt/Adjustable
No. Motors	1	1	1
Motor HP	1/2 or 3/4	1/2 or 3/4	3/4 or 1
Motor RPM Direct Drive/Belt Drive	1075/1725	1075/1725	1725
Motor Frame Size5	48 or 56	48 or 56	56
Filter			
Type	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes
[NO.] Size Recommended in. (mm × mm × mm)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)
Refrigerant Charge Oz. (g)			
Charge Oz. (g)	54 (1531)	68 (1928)	63

NOTES:
( ) Designates Metric Conversions
1. Cooling Performance is rated at 95° F ambient, 80° F entering dry bulb, 67° F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal CFM. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. Greater value indicates larger HP indoor fan motor
6. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.

Table 13: MPS H03C – H05C, High Efficiency

Model	H03C	H04C	H05C
Cooling Performance[1]			
Gross Cooling Capacity Btu (kW)	36,200 (10.61)	48,000 (14.06)	59,00 (17.29)
EER/SEER[2]	12.5/15	12.5/15	11.6/14
EER (1st Stage/2nd Stage)	N/A	N/A	19.9/11.6
Nominal CFM/AHRI Rated CFM (L/s)[7]	1200/1250 (566/590)	1600/1600 (755/755)	1375/1800 (649/849)
AHRI Net Cooling Capacity Btu (kW)[7]	35,400 (10.37)	46,500 (13.62)	49,000/57,000 (14.3/16.7)
Net Sensible Capacity Btu (kW)[7]	26,200 (7.68)	35,700 (10.46)	34/,800/40,800 (10.2/12.0)
Net Latent Capacity Btu (kW)[7]	9,200 (2.72)	10,800 (3.52)	17,500 (5.13)
Net System Power kW[7]	2.72	3.69	2.1/4.8
Compressor			
No./Type	1/Scroll	1/Scroll	1/Scroll
Gas Heating Performance			
AFUE %	81	81	81
Steady stage efficiency %	82	82	82
No. stages	1	1	1
Gas connection size	1/2"	1/2"	1/2"
Heating input (BtuH) low/medium/high	80,000/120,000	80,000/100,000/135,000	100,000/135,000
Heating output (BtuH)	64,800/97,200	64,800/81,000/109,400	81,000/109,400
Temperature rise °F	25-70	25-70	30 - 70
Sound[4]			
Outdoor Rating (dB)	78	78	83
Outdoor Coil			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth in. (mm)	0.7 (18)	0.7 (18)	0.7 (18)
Face Area sq. ft. (sq. m)	13.9 (1.29)	16.4 (1.52)	16.4 (1.52)
Rows / FPI (FPcm)	1 / 23 (9)	1 / 23 (9)	1 / 23 (9)
Indoor Coil - Fin Type			
Fin Type	Louvered	Louvered	Louvered
Tube Type	Microchannel	Microchannel	Microchannel
Microchannel Depth in. (mm)	1 (25)	1.3 (32)	1.3 (32)
Face Area sq. ft. (sq. m)	4.8 (0.45)	4.8 (0.45)	4.8 (0.45)
Rows / FPI (FPcm)	1/20 (8)	1/20 (8)	1/20 (8)
Refrigerant Control	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. (mm)	1/0.75 (19.05)	1/0.75 (19.05)	1/0.75 (19.05)
Outdoor Fan			
Type	Propeller	Propeller	Propeller
No. Used/Diameter in. (mm)	1/24 (609.6)	1/24 (609.6)	1/24 (609.6)
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1
CFM (L/s)	3680 (1737)	3680 (1737)	3930 (1855)
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075
Indoor Fan			
Type	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. (mm)	1/10×10 (254×254)	1/10×10 (254×254)	1/11×10 (279×254)
Drive Type/No. Speeds	Direct/1 or Belt/Adjustable	Direct/1 or Belt/Adjustable	Belt/Adjustable
No. Motors	1	1	1
Motor HP	1/2	1/2 or 3/4	1
Motor RPM Direct Drive/Belt Drive	1075/1725	1075/1725	1725
Motor Frame Size5	48 or 56	48 or 56	56
Filter			
Type	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes
[NO.] Size Recommended in. (mm × mm × mm)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)	[1] 1×16×25 (25×406×635) [1] 1×16×25 (25×406×635)
Refrigerant Charge Oz. (g)			
Charge Oz. (g)	54 (1531)	68 (1928)	63

NOTES:

[ ] Designates Metric Conversions

1. Cooling Performance is rated at 95°F ambient, 80°F entering dry bulb, 67°F entering wet bulb. Gross capacity does not include the effect of fan motor heat. AHRI capacity is net and includes the effect of fan motor heat. Units are suitable for operation to ±20% of nominal CFM. Units are certified in accordance with the Unitary Air Conditioner Equipment certification program, which is based on AHRI Standard 210/240 or 360.
2. EER and/or SEER are rated at AHRI conditions and in accordance with DOE test procedures.
3. Integrated Energy Efficiency Ratio (IEER) is rated in accordance with AHRI Standard 340/360.
4. Outdoor Sound Rating shown is tested in accordance with AHRI Standard 270.
5. Greater value indicates larger HP indoor fan motor
6. Heating Performance limit settings and rating data were established and approved under laboratory test conditions using ANSI standards.
7. Values shown for H05C model are both AHRI rated. (1st stage/2nd stage)

Motor Data

Table 14: Compressor and Condenser Motor Data – 208/230 Volt

Data	Electrical Data (208/230 V)*			Electrical Data (460 V)*			Electrical Data (575 V)*		
	MPS A03C	MPS A04C	MPS A05C	MPS A03C	MPS A04C	MPS A05C	MPS A03C	MPS A04C	MPS A05C
Compressor Motor									
No.	1			1			1		
Phase	3			3			3		
RPM	3450			3450			3450		
HP, Compressor 1	3	4	5	3	4	5	3	4	5
Amps (RLA), Comp. 1	10.4	13.7	15.6	5.8	6.2	7.5	3.8	4.8	5.8
Amps (LRA), Comp. 1	88	83.1	110	38	41	52	36.5	33	38.9
HP, Compressor 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Amps (RLA), Comp. 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Amps (LRA), Comp. 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Condenser Motor									
No.	1			1			1		
Phase	1			1			1		
HP	1/3			1/3			1/3		
Amps (FLA, each)	1.2/1.2			1.4			1.0		
Amps (LRA, each)	4.7/4.7			2.4			1.8		

NOTE: *Unit operating voltage range is 187 – 253 for 208/230V; 414 – 506 for 460V; 518 – 632 for 575 V.

MCA and MCOP Data

Table 15: Unit MCA and MCOP Data

MPS Model		Voltage					
		208/230		460		575	
		Low*	High	Low*	High	Low*	High
A03C	MCA	19.0	N/A	11.0	N/A	N/A	N/A
	MCOP	25.0	N/A	15.0	N/A	N/A	N/A
A04C	MCA	23.0	N/A	11.0	N/A	N/A	N/A
	MCOP	35.0	N/A	15.0	N/A	N/A	N/A
A05C	MCA	N/A	26.0	N/A	13.0	N/A	10.0
	MCOP	N/A	30.0	N/A	20.0	N/A	15.0

NOTE: *Low static option is a direct drive motor for models A03C and A04C.

Table 16: Miscellaneous Data

Electrical Data												
	A03				A04				A05			
Unit Information												
Unit Operating Voltage Range	187-253	187-253	414-506	414-506	187-253	187-253	414-506	414-506	187-253	187-253	414-506	414-506
Volts	208/230	208/230	460	460	208/230	208/230	460	460	208/230	208/230	460	460
Minimum Circuit Ampacity	16/16	16/16	10	10	21/21	22/22	11	11	26/26	27/27	13	13
Minimum Overcurrent Protection Device Size	20/20	20/20	15	15	25/25	25/25	15	15	30/30	35/35	15	15
Maximum Overcurrent Protection Device Size	20/20	20/20	15	15	30/30	30/30	15	15	40/40	40/40	20	20
Compressor Motor												
No.	1	1	1	1	1	1	1	1	1	1	1	1
Volts	208/230	208/230	460	460	208/230	208/230	460	460	208/230	208/230	460	460
Phase	3	3	3	3	3	3	3	3	3	3	3	3
RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450	3450
HP, Compressor 1	3	3	3	3	4	4	4	4	5	5	5	5
Amps (RLA), Comp. 1	9/9	9/9	5.6	5.6	13.1/13.1	13.1/13.1	6.1	6.1	16/16	16/16	7.8	7.8
Amps (LRA), Comp. 1	71/71	71/71	38	38	83.1/83.1	83.1/83.1	41	41	110/110	110/110	52	52
Condenser Motor												
No.	1	1	1	1	1	1	1	1	1	1	1	1
Volts	208/230	208/230	460	460	208/230	208/230	460	460	208/230	208/230	460	460
Phase	1	1	1	1	1	1	1	1	1	1	1	1
HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
Amps (FLA, each)	1.5/1.5	1.5/1.5	1	1	1.5/1.5	1.5/1.5	1	1	2.2/2.2	2.2/2.2	1	1
Amps (LRA, each)	3/3	3/3	1.9	1.9	3/3	3/3	1.9	1.9	4.9/4.9	4.9/4.9	1.9	1.9
Evaporator Fan												
No.	1	1	1	1	1	1	1	1	1	1	1	1
Volts	208/230	208/230	460	460	208/230	208/230	460	460	208/230	208/230	460	460
Phase	3	3	3	3	3	3	3	3	3	3	3	3
HP	1/2	1/2	1/2	1/2	1/2	3/4	1/2	3/4	3/4	1	3/4	1
Amps (FLA, each)	2.8/2.8	2.8/2.8	1.4	1.4	2.8/2.8	3.4/3.4	1.4	1.6	3.4/3.4	4.1/4.1	1.6	2
Amps (LRA, each)	11.3/11.3	11.3/11.3	6.2	6.2	11.3/11.3	16.8/16.8	6.2	8.4	16.8/16.8	24/24	8.4	12

Unit Dimensions MPS A03C – A05C

Figure 27: Bottom View

Important: This unit must be mounted level in both directions to allow water to drain from the condenser section and condensate pan.

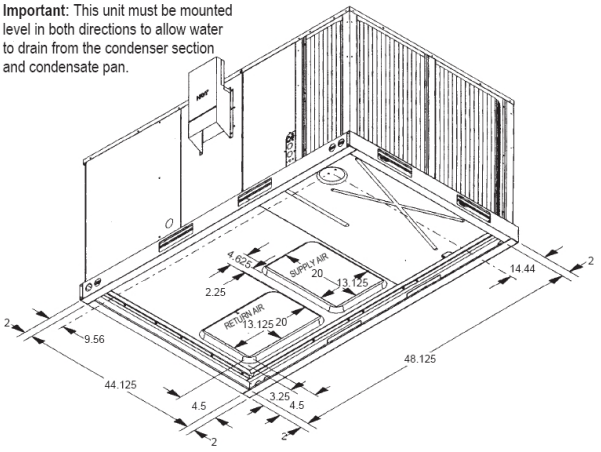


Figure 28: Cabinet Dimensions and Access Locations

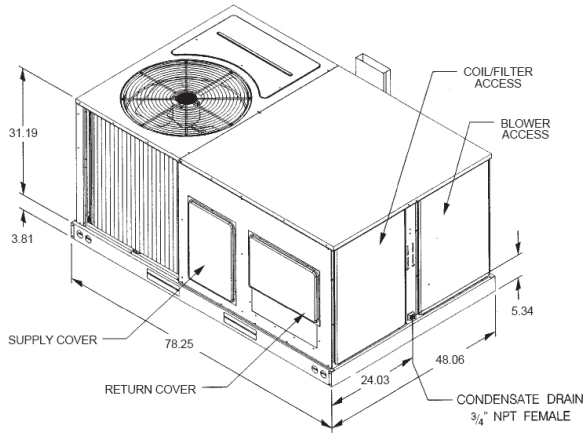


Figure 29: Cabinet Dimensions and Access Locations – Gas Heat Units

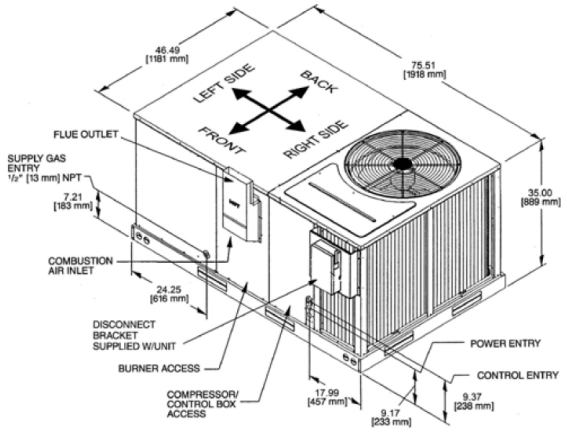


Figure 30: Unit Dimensions

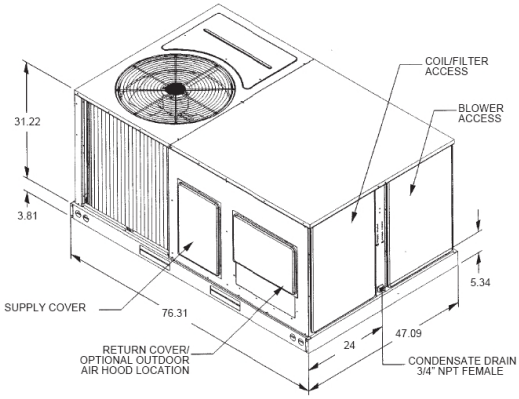


Figure 31: Supply and Return Dimensions – Back View

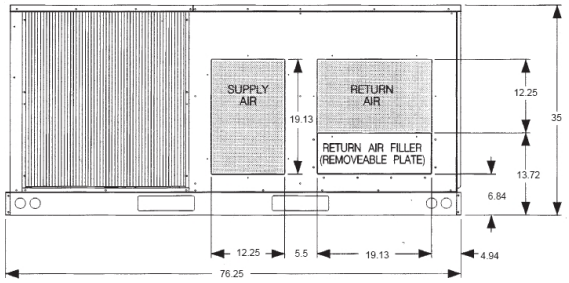
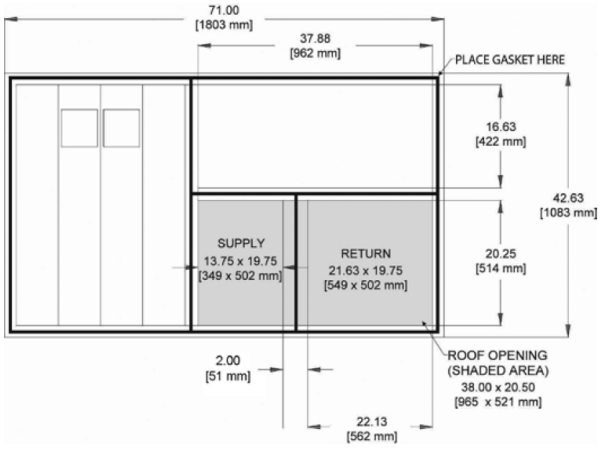


Figure 32: MPS A03C – A05C Curb Dimensions



System Performance – Standard Efficiency

Table 17: Gross System Performance—MPS A03C, 3 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]											
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)		
CFM (L/s)			1375 (649)	1250 (590)	1062 (501)	1375 (649)	1250 (590)	1062 (501)	1375 (649)	1250 (590)	1062 (501)
DR[1]			0.2	0.18	0.15	0.2	0.18	0.15	0.2	0.18	0.15
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	44.7 (13.1)	43.9 (12.9)	42.7 (12.5)	41.5 (12.2)	40.7 (11.9)	39.6 (11.6)	38.5 (11.3)	37.8 (11.1)	36.8 (10.8)
		Sens BTUH (kW)	23.8 (7.0)	22.8 (6.7)	21.2 (6.2)	29.7 (8.7)	28.4 (8.3)	26.4 (7.7)	33.2 (9.7)	31.7 (9.3)	29.5 (8.6)
		Power (kW)	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9
	80 (26.7)	Total BTUH (kW)	43.6 (12.8)	42.9 (12.6)	41.7 (12.2)	40.4 (11.8)	39.7 (11.6)	38.6 (11.3)	37.4 (11.0)	36.7 (10.8)	35.7 (10.5)
		Sens BTUH (kW)	23.7 (6.9)	22.6 (6.6)	21.0 (6.2)	29.5 (8.6)	28.2 (8.3)	26.2 (7.7)	33.0 (9.7)	31.6 (9.3)	29.4 (8.6)
		Power (kW)	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.0
	85 (29.4)	Total BTUH (kW)	42.5 (12.5)	41.7 (12.2)	40.6 (11.9)	39.3 (11.5)	38.6 (11.3)	37.5 (11.0)	36.3 (10.6)	35.6 (10.4)	34.6 (10.2)
		Sens BTUH (kW)	23.4 (6.8)	22.3 (6.5)	20.8 (6.1)	29.2 (8.6)	27.9 (8.2)	26.0 (7.6)	32.8 (9.6)	31.3 (9.2)	29.1 (8.5)
		Power (kW)	2.2	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2
	90 (32.2)	Total BTUH (kW)	41.4 (12.1)	40.6 (11.9)	39.5 (11.6)	38.1 (11.2)	37.4 (11.0)	36.4 (10.7)	35.1 (10.3)	34.5 (10.1)	33.5 (9.8)
		Sens BTUH (kW)	22.9 (6.7)	21.9 (6.4)	20.4 (6.0)	28.8 (8.4)	27.5 (8.1)	25.6 (7.5)	32.3 (9.5)	30.9 (9.1)	28.7 (8.4)
		Power (kW)	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.3
	95 (35)	Total BTUH (kW)	40.2 (11.8)	39.5 (11.6)	38.4 (11.2)	36.9 (10.8)	**36.3 (10.6)**	35.3 (10.3)	33.9 (9.9)	33.3 (9.8)	32.4 (9.5)
		Sens BTUH (kW)	22.4 (6.6)	21.4 (6.3)	19.9 (5.8)	28.2 (8.3)	**27.0 (7.9)**	25.1 (7.3)	31.8 (9.3)	30.3 (8.9)	28.2 (8.3)
		Power (kW)	2.5	2.4	2.4	2.5	**2.5**	2.4	2.5	2.5	2.5
	100 (37.8)	Total BTUH (kW)	39.0 (11.4)	38.3 (11.2)	37.2 (10.9)	35.7 (10.5)	35.1 (10.3)	34.1 (10.0)	32.7 (9.6)	32.2 (9.4)	31.3 (9.2)
		Sens BTUH (kW)	21.7 (6.4)	20.7 (6.1)	19.3 (5.6)	27.5 (8.1)	26.3 (7.7)	24.5 (7.2)	31.1 (9.1)	29.7 (8.7)	27.6 (8.1)
		Power (kW)	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.6
	105 (40.6)	Total BTUH (kW)	37.7 (11.1)	37.1 (10.9)	36.1 (10.6)	34.5 (10.1)	33.9 (9.9)	33.0 (9.7)	31.5 (9.2)	30.9 (9.1)	30.1 (8.8)
		Sens BTUH (kW)	20.9 (6.1)	19.9 (5.8)	18.5 (5.4)	26.7 (7.8)	25.5 (7.5)	23.7 (7.0)	30.2 (8.9)	28.9 (8.5)	26.9 (7.9)
		Power (kW)	2.8	2.7	2.7	2.8	2.8	2.7	2.8	2.8	2.8
	110 (43.3)	Total BTUH (kW)	36.5 (10.7)	35.8 (10.5)	34.9 (10.2)	33.2 (9.7)	32.7 (9.6)	31.8 (9.3)	30.3 (8.9)	29.7 (8.7)	28.9 (8.5)
		Sens BTUH (kW)	19.9 (5.8)	19.0 (5.6)	17.7 (5.2)	25.7 (7.5)	24.6 (7.2)	22.9 (6.7)	29.3 (8.6)	28.0 (8.2)	26.0 (7.6)
		Power (kW)	2.9	2.9	2.9	3.0	2.9	2.9	3.0	3.0	2.9
	115 (46.1)	Total BTUH (kW)	35.2 (10.3)	34.6 (10.1)	33.6 (9.9)	32.0 (9.4)	31.4 (9.2)	30.5 (8.9)	29.0 (8.5)	28.5 (8.3)	27.7 (8.1)
		Sens BTUH (kW)	18.8 (5.5)	18.0 (5.3)	16.7 (4.9)	24.7 (7.2)	23.6 (6.9)	21.9 (6.4)	28.2 (8.3)	26.9 (7.9)	25.0 (7.3)
		Power (kW)	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.1
	120 (48.9)	Total BTUH (kW)	33.9 (9.9)	33.3 (9.8)	32.4 (9.5)	30.7 (9.0)	30.1 (8.8)	29.3 (8.6)	27.7 (8.1)	27.2 (8.0)	26.4 (7.7)
		Sens BTUH (kW)	17.6 (5.1)	16.8 (4.9)	15.6 (4.6)	23.4 (6.9)	22.4 (6.6)	20.8 (6.1)	27.0 (7.9)	25.8 (7.5)	24.0 (7.0)
		Power (kW)	3.3	3.3	3.2	3.3	3.3	3.3	3.4	3.3	3.3
	125 (51.7)	Total BTUH (kW)	32.6 (9.5)	32.0 (9.4)	31.1 (9.1)	29.3 (8.6)	28.8 (8.4)	28.0 (8.2)	26.3 (7.7)	25.9 (7.6)	25.2 (7.4)
		Sens BTUH (kW)	16.2 (4.8)	15.5 (4.5)	14.4 (4.2)	22.1 (6.5)	21.1 (6.2)	19.6 (5.7)	25.6 (7.5)	24.5 (7.2)	22.7 (6.7)
		Power (kW)	3.5	3.5	3.4	3.5	3.5	3.4	3.6	3.5	3.5

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input
1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 18: Gross System Performance—MPS A04C, 4 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]											
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)		
CFM (L/s)			1650 (779)	1500 (708)	1275 (602)	1650 (779)	1500 (708)	1275 (602)	1650 (779)	1500 (708)	1275 (602)
DR[1]			0.1	0.08	0.05	0.1	0.08	0.05	0.1	0.08	0.05
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	60.3 (17.7)	59.3 (17.4)	57.6 (16.9)	56.1 (16.4)	55.1 (16.1)	53.6 (15.7)	51.1 (15.0)	50.2 (14.7)	48.8 (14.3)
		Sens BTUH (kW)	31.2 (9.2)	29.8 (8.7)	27.7 (8.1)	39.8 (11.7)	38.1 (11.2)	35.4 (10.4)	43.9 (12.9)	41.9 (12.3)	39.0 (11.4)
		Power (kW)	2.6	2.6	2.5	2.6	2.6	2.5	2.6	2.5	2.5
	80 (26.7)	Total BTUH (kW)	58.5 (17.1)	57.4 (16.8)	55.9 (16.4)	54.2 (15.9)	53.2 (15.6)	51.8 (15.2)	49.2 (14.4)	48.4 (14.2)	47.0 (13.8)
		Sens BTUH (kW)	31.0 (9.1)	29.6 (8.7)	27.5 (8.1)	39.6 (11.6)	37.8 (11.1)	35.2 (10.3)	43.6 (12.8)	41.7 (12.2)	38.8 (11.4)
		Power (kW)	2.8	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
	85 (29.4)	Total BTUH (kW)	56.7 (16.6)	55.7 (16.3)	54.2 (15.9)	52.4 (15.4)	51.5 (15.1)	50.1 (14.7)	47.5 (13.9)	46.6 (13.7)	45.3 (13.3)
		Sens BTUH (kW)	30.6 (9.0)	29.2 (8.6)	27.1 (8.0)	39.2 (11.5)	37.4 (11.0)	34.8 (10.2)	43.2 (12.7)	41.3 (12.1)	38.4 (11.3)
		Power (kW)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
	90 (32.2)	Total BTUH (kW)	55.0 (16.1)	54.0 (15.8)	52.5 (15.4)	50.7 (14.9)	49.8 (14.6)	48.4 (14.2)	45.7 (13.4)	44.9 (13.2)	43.7 (12.8)
		Sens BTUH (kW)	30.0 (8.8)	28.6 (8.4)	26.6 (7.8)	38.6 (11.3)	36.9 (10.8)	34.3 (10.0)	42.6 (12.5)	40.7 (11.9)	37.9 (11.1)
		Power (kW)	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0
	95 (35)	Total BTUH (kW)	53.3 (15.6)	52.3 (15.3)	50.9 (14.9)	49.0 (14.4)	**48.1 (14.1)**	46.8 (13.7)	44.1 (12.9)	43.3 (12.7)	42.1 (12.3)
		Sens BTUH (kW)	29.2 (8.6)	27.9 (8.2)	26.0 (7.6)	37.8 (11.1)	**36.1 (10.6)**	33.6 (9.9)	41.9 (12.3)	40.0 (11.7)	37.2 (10.9)
		Power (kW)	3.3	3.3	3.3	3.3	**3.3**	3.3	3.3	3.3	3.2
	100 (37.8)	Total BTUH (kW)	51.7 (15.2)	50.8 (14.9)	49.4 (14.5)	47.4 (13.9)	46.6 (13.7)	45.3 (13.3)	42.5 (12.4)	41.7 (12.2)	40.6 (11.9)
		Sens BTUH (kW)	28.3 (8.3)	27.0 (7.9)	25.2 (7.4)	36.9 (10.8)	35.3 (10.3)	32.8 (9.6)	41.0 (12.0)	39.2 (11.5)	36.4 (10.7)
		Power (kW)	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	105 (40.6)	Total BTUH (kW)	50.2 (14.7)	49.3 (14.4)	47.9 (14.0)	45.9 (13.5)	45.1 (13.2)	43.9 (12.9)	40.9 (12.0)	40.2 (11.8)	39.1 (11.5)
		Sens BTUH (kW)	27.2 (8.0)	26.0 (7.6)	24.2 (7.1)	35.8 (10.5)	34.3 (10.0)	31.9 (9.3)	39.9 (11.7)	38.1 (11.2)	35.5 (10.4)
		Power (kW)	3.8	3.8	3.7	3.8	3.7	3.7	3.8	3.7	3.7
	110 (43.3)	Total BTUH (kW)	48.7 (14.3)	47.8 (14.0)	46.5 (13.6)	44.4 (13.0)	43.6 (12.8)	42.5 (12.4)	39.5 (11.6)	38.8 (11.4)	37.7 (11.1)
		Sens BTUH (kW)	26.0 (7.6)	24.8 (7.3)	23.1 (6.8)	34.6 (10.1)	33.1 (9.7)	30.8 (9.0)	38.7 (11.3)	36.9 (10.8)	34.4 (10.1)
		Power (kW)	4.0	4.0	3.9	4.0	4.0	3.9	4.0	4.0	3.9
	115 (46.1)	Total BTUH (kW)	47.3 (13.9)	46.5 (13.6)	45.2 (13.2)	43.0 (12.6)	42.3 (12.4)	41.1 (12.0)	38.1 (11.2)	37.4 (11.0)	36.4 (10.7)
		Sens BTUH (kW)	24.6 (7.2)	23.5 (6.9)	21.8 (6.4)	33.2 (9.7)	31.7 (9.3)	29.5 (8.6)	37.3 (10.9)	35.6 (10.4)	33.1 (9.7)
		Power (kW)	4.3	4.2	4.2	4.3	4.2	4.2	4.3	4.2	4.2
	120 (48.9)	Total BTUH (kW)	46.0 (13.5)	45.2 (13.2)	43.9 (12.9)	41.7 (12.2)	41.0 (12.0)	39.8 (11.7)	36.7 (10.8)	36.1 (10.6)	35.1 (10.3)
		Sens BTUH (kW)	23.0 (6.7)	22.0 (6.4)	20.5 (6.0)	31.6 (9.3)	30.2 (8.9)	28.1 (8.2)	35.7 (10.5)	34.1 (10.0)	31.7 (9.3)
		Power (kW)	4.5	4.5	4.4	4.5	4.5	4.4	4.5	4.5	4.4
	125 (51.7)	Total BTUH (kW)	44.7 (13.1)	43.9 (12.9)	42.7 (12.5)	40.4 (11.8)	39.7 (11.6)	38.6 (11.3)	35.5 (10.4)	34.8 (10.2)	33.9 (9.9)
		Sens BTUH (kW)	21.3 (6.2)	20.3 (6.0)	18.9 (5.5)	29.9 (8.8)	28.6 (8.4)	26.6 (7.8)	34.0 (10.0)	32.4 (9.5)	30.2 (8.8)
		Power (kW)	4.8	4.8	4.7	4.8	4.8	4.7	4.8	4.7	4.7

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input

1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 19: Gross System Performance—MPS A05C5 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]												
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)			1980 (934)	1800 (850)	1530 (722)	1980 (934)	1800 (850)	1530 (722)	1980 (934)	1800 (850)	1530 (722)	
DR[1]			0.13	0.12	0.09	0.13	0.12	0.09	0.13	0.12	0.09	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	73.9 (21.6)	72.6 (21.3)	70.6 (20.7)	67.7 (19.8)	66.5 (19.5)	64.7 (19.0)	62.5 (18.3)	61.4 (18.0)	59.7 (17.5)	
		Sens BTUH (kW)	37.0 (10.8)	35.3 (10.4)	32.9 (9.6)	46.2 (13.5)	44.2 (12.9)	41.1 (12.0)	52.3 (15.3)	50.0 (14.7)	46.5 (13.6)	
		Power (kW)	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.6	3.5	
	80 (26.7)	Total BTUH (kW)	72.5 (21.2)	71.2 (20.9)	69.2 (20.3)	66.3 (19.4)	65.1 (19.1)	63.3 (18.6)	61.1 (17.9)	60.0 (17.6)	58.3 (17.1)	
		Sens BTUH (kW)	37.2 (10.9)	35.6 (10.4)	33.1 (9.7)	46.5 (13.6)	44.4 (13.0)	41.3 (12.1)	52.6 (15.4)	50.3 (14.7)	46.7 (13.7)	
		Power (kW)	3.8	3.8	3.8	3.8	3.8	3.7	3.8	3.8	3.7	
	85 (29.4)	Total BTUH (kW)	70.9 (20.8)	69.6 (20.4)	67.7 (19.8)	64.7 (19.0)	63.6 (18.6)	61.8 (18.1)	59.5 (17.4)	58.5 (17.1)	56.9 (16.7)	
		Sens BTUH (kW)	37.2 (10.9)	35.5 (10.4)	33.0 (9.7)	46.5 (13.6)	44.4 (13.0)	41.3 (12.1)	52.6 (15.4)	50.2 (14.7)	46.7 (13.7)	
		Power (kW)	4.1	4.0	4.0	4.0	4.0	3.9	4.0	4.0	3.9	
	90 (32.2)	Total BTUH (kW)	69.2 (20.3)	68.0 (19.9)	66.1 (19.4)	63.0 (18.5)	61.9 (18.1)	60.2 (17.6)	57.8 (16.9)	56.8 (16.6)	55.3 (16.2)	
		Sens BTUH (kW)	36.8 (10.8)	35.2 (10.3)	32.7 (9.6)	46.1 (13.5)	44.0 (12.9)	40.9 (12.0)	52.2 (15.3)	49.8 (14.6)	46.4 (13.6)	
		Power (kW)	4.3	4.3	4.2	4.3	4.2	4.2	4.2	4.2	4.1	
	95 (35)	Total BTUH (kW)	67.4 (19.8)	66.2 (19.4)	64.4 (18.9)	61.2 (17.9)	**60.1 (17.6)**	58.5 (17.1)	56.0 (16.4)	55.0 (16.1)	53.5 (15.7)	
		Sens BTUH (kW)	36.1 (10.6)	34.5 (10.1)	32.1 (9.4)	45.4 (13.3)	**43.3 (12.7)**	40.3 (11.8)	51.5 (15.1)	49.2 (14.4)	45.7 (13.4)	
		Power (kW)	4.5	4.5	4.4	4.5	**4.5**	4.4	4.5	4.4	4.4	
	100 (37.8)	Total BTUH (kW)	65.5 (19.2)	64.3 (18.8)	62.5 (18.3)	59.3 (17.4)	58.2 (17.1)	56.6 (16.6)	54.1 (15.8)	53.1 (15.6)	51.7 (15.1)	
		Sens BTUH (kW)	35.1 (10.3)	33.5 (9.8)	31.1 (9.1)	44.3 (13.0)	42.3 (12.4)	39.4 (11.5)	50.4 (14.8)	48.2 (14.1)	44.8 (13.1)	
		Power (kW)	4.8	4.8	4.7	4.8	4.7	4.7	4.7	4.7	4.6	
	105 (40.6)	Total BTUH (kW)	63.4 (18.6)	62.3 (18.2)	60.6 (17.7)	57.2 (16.8)	56.2 (16.5)	54.7 (16.0)	52.0 (15.2)	51.1 (15.0)	49.7 (14.6)	
		Sens BTUH (kW)	33.7 (9.9)	32.2 (9.4)	29.9 (8.8)	42.9 (12.6)	41.0 (12.0)	38.2 (11.2)	49.0 (14.4)	46.9 (13.7)	43.6 (12.8)	
		Power (kW)	5.1	5.0	5.0	5.0	5.0	4.9	5.0	5.0	4.9	
	110 (43.3)	Total BTUH (kW)	61.2 (17.9)	60.1 (17.6)	58.5 (17.1)	55.0 (16.1)	54.0 (15.8)	52.6 (15.4)	49.8 (14.6)	48.9 (14.3)	47.6 (13.9)	
		Sens BTUH (kW)	32.0 (9.4)	30.6 (9.0)	28.4 (8.3)	41.2 (12.1)	39.4 (11.5)	36.6 (10.7)	47.3 (13.9)	45.2 (13.3)	42.1 (12.3)	
		Power (kW)	5.3	5.3	5.2	5.3	5.3	5.2	5.3	5.2	5.2	
	115 (46.1)	Total BTUH (kW)	58.9 (17.3)	57.8 (16.9)	56.2 (16.5)	52.7 (15.4)	51.7 (15.2)	50.3 (14.8)	47.5 (13.9)	46.6 (13.7)	45.4 (13.3)	
		Sens BTUH (kW)	30.0 (8.8)	28.6 (8.4)	26.6 (7.8)	39.2 (11.5)	37.5 (11.0)	34.8 (10.2)	45.3 (13.3)	43.3 (12.7)	40.3 (11.8)	
		Power (kW)	5.6	5.6	5.5	5.6	5.6	5.5	5.6	5.5	5.5	
	120 (48.9)	Total BTUH (kW)	56.4 (16.5)	55.4 (16.2)	53.9 (15.8)	50.2 (14.7)	49.3 (14.5)	48.0 (14.1)	45.0 (13.2)	44.2 (13.0)	43.0 (12.6)	
		Sens BTUH (kW)	27.6 (8.1)	26.4 (7.7)	24.5 (7.2)	36.9 (10.8)	35.2 (10.3)	32.7 (9.6)	43.0 (12.6)	41.0 (12.0)	38.2 (11.2)	
		Power (kW)	5.9	5.9	5.8	5.9	5.9	5.8	5.9	5.8	5.8	
	125 (51.7)	Total BTUH (kW)	53.8 (15.8)	52.9 (15.5)	51.4 (15.1)	47.6 (14.0)	46.8 (13.7)	45.5 (13.3)	42.4 (12.4)	41.7 (12.2)	40.5 (11.9)	
		Sens BTUH (kW)	24.9 (7.3)	23.8 (7.0)	22.1 (6.5)	34.2 (10.0)	32.6 (9.6)	30.4 (8.9)	40.3 (11.8)	38.5 (11.3)	35.8 (10.5)	
		Power (kW)	6.3	6.2	6.1	6.2	6.2	6.1	6.2	6.2	6.1	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input

1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

System Performance – High Efficiency

Table 20: Gross System Performance—MPS H03C, 3 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]												
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)			1375 (649)	1250 (590)	1062 (501)	1375 (649)	1250 (590)	1062 (501)	1375 (649)	1250 (590)	1062 (501)	
DR[1]			0.19	0.17	0.14	0.19	0.17	0.14	0.19	0.17	0.14	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	45.2 (13.3)	44.4 (13.0)	43.2 (12.7)	41.8 (12.2)	41.0 (12.0)	39.9 (11.7)	39.0 (11.4)	38.3 (11.2)	37.3 (10.9)	
		Sens BTUH (kW)	24.2 (7.1)	23.1 (6.8)	21.5 (6.3)	29.9 (8.8)	28.6 (8.4)	26.6 (7.8)	33.7 (9.9)	32.2 (9.4)	29.9 (8.8)	
		Power (kW)	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	
	80 (26.7)	Total BTUH (kW)	44.0 (12.9)	43.2 (12.7)	42.1 (12.3)	40.6 (11.9)	39.8 (11.7)	38.8 (11.4)	37.8 (11.1)	37.1 (10.9)	36.1 (10.6)	
		Sens BTUH (kW)	24.0 (7.0)	22.9 (6.7)	21.3 (6.2)	29.7 (8.7)	28.4 (8.3)	26.4 (7.7)	33.5 (9.8)	32.0 (9.4)	29.8 (8.7)	
		Power (kW)	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	
	85 (29.4)	Total BTUH (kW)	42.8 (12.5)	42.1 (12.3)	40.9 (12.0)	39.4 (11.5)	38.7 (11.3)	37.6 (11.0)	36.6 (10.7)	35.9 (10.5)	34.9 (10.2)	
		Sens BTUH (kW)	23.7 (6.9)	22.6 (6.6)	21.0 (6.2)	29.4 (8.6)	28.1 (8.2)	26.1 (7.7)	33.2 (9.7)	31.7 (9.3)	29.5 (8.6)	
		Power (kW)	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	
	90 (32.2)	Total BTUH (kW)	41.6 (12.2)	40.9 (12.0)	39.8 (11.6)	38.1 (11.2)	37.5 (11.0)	36.4 (10.7)	35.4 (10.4)	34.7 (10.2)	33.8 (9.9)	
		Sens BTUH (kW)	23.2 (6.8)	22.2 (6.5)	20.6 (6.0)	28.9 (8.5)	27.6 (8.1)	25.7 (7.5)	32.7 (9.6)	31.2 (9.2)	29.1 (8.5)	
		Power (kW)	2.3	2.3	2.2	2.3	2.3	2.3	2.4	2.3	2.3	
	95 (35)	Total BTUH (kW)	40.4 (11.8)	39.7 (11.6)	38.6 (11.3)	36.9 (10.8)	**36.3 (10.6)**	35.3 (10.3)	34.2 (10.0)	33.6 (9.8)	32.6 (9.6)	
		Sens BTUH (kW)	22.6 (6.6)	21.6 (6.3)	20.1 (5.9)	28.4 (8.3)	**27.1 (7.9)**	25.2 (7.4)	32.1 (9.4)	30.7 (9.0)	28.5 (8.4)	
		Power (kW)	2.5	2.4	2.4	2.5	**2.5**	2.4	2.5	2.5	2.5	
	100 (37.8)	Total BTUH (kW)	39.2 (11.5)	38.5 (11.3)	37.5 (11.0)	35.8 (10.5)	35.1 (10.3)	34.2 (10.0)	33.0 (9.7)	32.4 (9.5)	31.5 (9.2)	
		Sens BTUH (kW)	21.9 (6.4)	20.9 (6.1)	19.5 (5.7)	27.6 (8.1)	26.4 (7.7)	24.6 (7.2)	31.4 (9.2)	30.0 (8.8)	27.9 (8.2)	
		Power (kW)	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.6	
	105 (40.6)	Total BTUH (kW)	38.0 (11.1)	37.3 (10.9)	36.3 (10.6)	34.6 (10.1)	33.9 (9.9)	33.0 (9.7)	31.8 (9.3)	31.2 (9.1)	30.4 (8.9)	
		Sens BTUH (kW)	21.1 (6.2)	20.1 (5.9)	18.7 (5.5)	26.8 (7.9)	25.6 (7.5)	23.8 (7.0)	30.6 (9.0)	29.2 (8.6)	27.2 (8.0)	
		Power (kW)	2.8	2.8	2.7	2.8	2.8	2.8	2.8	2.8	2.8	
	110 (43.3)	Total BTUH (kW)	36.8 (10.8)	36.2 (10.6)	35.2 (10.3)	33.4 (9.8)	32.8 (9.6)	31.9 (9.3)	30.6 (9.0)	30.1 (8.8)	29.2 (8.6)	
		Sens BTUH (kW)	20.1 (5.9)	19.2 (5.6)	17.9 (5.2)	25.8 (7.6)	24.7 (7.2)	23.0 (6.7)	29.6 (8.7)	28.3 (8.3)	26.3 (7.7)	
		Power (kW)	3.0	2.9	2.9	3.0	3.0	2.9	3.0	3.0	3.0	
	115 (46.1)	Total BTUH (kW)	35.7 (10.4)	35.0 (10.3)	34.1 (10.0)	32.2 (9.4)	31.6 (9.3)	30.8 (9.0)	29.4 (8.6)	28.9 (8.5)	28.1 (8.2)	
		Sens BTUH (kW)	19.0 (5.6)	18.2 (5.3)	16.9 (4.9)	24.7 (7.3)	23.6 (6.9)	22.0 (6.4)	28.5 (8.4)	27.2 (8.0)	25.3 (7.4)	
		Power (kW)	3.2	3.1	3.1	3.2	3.2	3.1	3.2	3.2	3.1	
	120 (48.9)	Total BTUH (kW)	34.5 (10.1)	33.9 (9.9)	32.9 (9.7)	31.0 (9.1)	30.5 (8.9)	29.6 (8.7)	28.2 (8.3)	27.7 (8.1)	27.0 (7.9)	
		Sens BTUH (kW)	17.8 (5.2)	17.0 (5.0)	15.8 (4.6)	23.5 (6.9)	22.5 (6.6)	20.9 (6.1)	27.3 (8.0)	26.1 (7.6)	24.3 (7.1)	
		Power (kW)	3.4	3.3	3.3	3.4	3.4	3.3	3.4	3.4	3.3	
	125 (51.7)	Total BTUH (kW)	33.3 (9.8)	32.7 (9.6)	31.8 (9.3)	29.8 (8.7)	29.3 (8.6)	28.5 (8.4)	27.1 (7.9)	26.6 (7.8)	25.9 (7.6)	
		Sens BTUH (kW)	16.4 (4.8)	15.7 (4.6)	14.6 (4.3)	22.2 (6.5)	21.2 (6.2)	19.7 (5.8)	26.0 (7.6)	24.8 (7.3)	23.1 (6.8)	
		Power (kW)	3.6	3.5	3.5	3.6	3.6	3.5	3.6	3.6	3.5	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input

1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 21: Gross System Performance—MPS H04C, 4 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]												
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)			1760 (831)	1600 (755)	1360 (642)	1760 (831)	1600 (755)	1360 (642)	1760 (831)	1600 (755)	1360 (642)	
DR[1]			0.11	0.09	0.05	0.11	0.09	0.05	0.11	0.09	0.05	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	58.9 (17.3)	57.8 (16.9)	56.2 (16.5)	55.1 (16.1)	54.1 (15.9)	52.6 (15.4)	49.6 (14.5)	48.8 (14.3)	47.4 (13.9)	
		Sens BTUH (kW)	31.1 (9.1)	29.7 (8.7)	27.6 (8.1)	40.2 (11.8)	38.4 (11.3)	35.7 (10.5)	43.7 (12.8)	41.8 (12.2)	38.9 (11.4)	
		Power (kW)	2.6	2.6	2.5	2.6	2.5	2.5	2.6	2.5	2.5	
	80 (26.7)	Total BTUH (kW)	57.3 (16.8)	56.3 (16.5)	54.7 (16.0)	53.5 (15.7)	52.6 (15.4)	51.1 (15.0)	48.1 (14.1)	47.2 (13.8)	45.9 (13.5)	
		Sens BTUH (kW)	31.1 (9.1)	29.7 (8.7)	27.6 (8.1)	40.2 (11.8)	38.4 (11.3)	35.7 (10.5)	43.7 (12.8)	41.8 (12.2)	38.9 (11.4)	
		Power (kW)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	
	85 (29.4)	Total BTUH (kW)	55.7 (16.3)	54.7 (16.0)	53.2 (15.6)	51.9 (15.2)	51.0 (15.0)	49.6 (14.5)	46.5 (13.6)	45.7 (13.4)	44.4 (13.0)	
		Sens BTUH (kW)	30.9 (9.0)	29.5 (8.6)	27.4 (8.0)	40.0 (11.7)	38.2 (11.2)	35.5 (10.4)	43.5 (12.7)	41.6 (12.2)	38.7 (11.3)	
		Power (kW)	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.8	
	90 (32.2)	Total BTUH (kW)	54.1 (15.9)	53.2 (15.6)	51.7 (15.2)	50.4 (14.8)	49.5 (14.5)	48.1 (14.1)	44.9 (13.2)	44.1 (12.9)	42.9 (12.6)	
		Sens BTUH (kW)	30.4 (8.9)	29.1 (8.5)	27.0 (7.9)	39.5 (11.6)	37.7 (11.1)	35.1 (10.3)	43.1 (12.6)	41.1 (12.1)	38.3 (11.2)	
		Power (kW)	3.1	3.1	3.0	3.1	3.1	3.0	3.1	3.1	3.0	
	95 (35)	Total BTUH (kW)	52.5 (15.4)	51.6 (15.1)	50.2 (14.7)	48.8 (14.3)	**47.9 (14.0)**	46.6 (13.7)	43.3 (12.7)	42.5 (12.5)	41.4 (12.1)	
		Sens BTUH (kW)	29.7 (8.7)	28.4 (8.3)	26.4 (7.7)	38.8 (11.4)	**37.1 (10.9)**	34.5 (10.1)	42.4 (12.4)	40.5 (11.9)	37.7 (11.0)	
		Power (kW)	3.3	3.3	3.2	3.3	**3.3**	3.2	3.3	3.3	3.2	
	100 (37.8)	Total BTUH (kW)	50.9 (14.9)	50.0 (14.7)	48.7 (14.3)	47.2 (13.8)	46.3 (13.6)	45.1 (13.2)	41.7 (12.2)	41.0 (12.0)	39.9 (11.7)	
		Sens BTUH (kW)	28.8 (8.4)	27.5 (8.1)	25.6 (7.5)	37.9 (11.1)	36.2 (10.6)	33.7 (9.9)	41.5 (12.2)	39.6 (11.6)	36.8 (10.8)	
		Power (kW)	3.5	3.5	3.5	3.5	3.5	3.4	3.5	3.5	3.4	
	105 (40.6)	Total BTUH (kW)	49.3 (14.5)	48.5 (14.2)	47.1 (13.8)	45.6 (13.4)	44.8 (13.1)	43.5 (12.8)	40.1 (11.8)	39.4 (11.5)	38.3 (11.2)	
		Sens BTUH (kW)	27.7 (8.1)	26.5 (7.8)	24.6 (7.2)	36.8 (10.8)	35.1 (10.3)	32.7 (9.6)	40.1 (11.8)	38.5 (11.3)	35.8 (10.5)	
		Power (kW)	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	
	110 (43.3)	Total BTUH (kW)	47.7 (14.0)	46.9 (13.7)	45.6 (13.4)	44.0 (12.9)	43.2 (12.7)	42.0 (12.3)	38.5 (11.3)	37.8 (11.1)	36.8 (10.8)	
		Sens BTUH (kW)	26.3 (7.7)	25.2 (7.4)	23.4 (6.9)	35.4 (10.4)	33.8 (9.9)	31.5 (9.2)	38.5 (11.3)	37.2 (10.9)	34.6 (10.1)	
		Power (kW)	4.0	4.0	3.9	4.0	3.9	3.9	4.0	3.9	3.9	
	115 (46.1)	Total BTUH (kW)	46.1 (13.5)	45.3 (13.3)	44.1 (12.9)	42.3 (12.4)	41.6 (12.2)	40.4 (11.9)	36.9 (10.8)	36.2 (10.6)	35.2 (10.3)	
		Sens BTUH (kW)	24.7 (7.2)	23.6 (6.9)	22.0 (6.4)	33.8 (9.9)	32.3 (9.5)	30.1 (8.8)	36.9 (10.8)	35.7 (10.5)	33.2 (9.7)	
		Power (kW)	4.2	4.2	4.1	4.2	4.2	4.1	4.2	4.2	4.1	
	120 (48.9)	Total BTUH (kW)	44.5 (13.0)	43.7 (12.8)	42.5 (12.5)	40.7 (11.9)	40.0 (11.7)	38.9 (11.4)	35.3 (10.3)	34.6 (10.1)	33.7 (9.9)	
		Sens BTUH (kW)	22.9 (6.7)	21.9 (6.4)	20.4 (6.0)	32.0 (9.4)	30.6 (9.0)	28.4 (8.3)	35.3 (10.3)	34.0 (10.0)	31.6 (9.3)	
		Power (kW)	4.5	4.5	4.4	4.5	4.4	4.4	4.5	4.4	4.4	
	125 (51.7)	Total BTUH (kW)	42.9 (12.6)	42.1 (12.3)	40.9 (12.0)	39.1 (11.5)	38.4 (11.2)	37.3 (10.9)	33.6 (9.9)	33.0 (9.7)	32.1 (9.4)	
		Sens BTUH (kW)	20.9 (6.1)	19.9 (5.8)	18.5 (5.4)	30.0 (8.8)	28.6 (8.4)	26.6 (7.8)	33.5 (9.8)	32.0 (9.4)	29.8 (8.7)	
		Power (kW)	4.8	4.7	4.7	4.8	4.7	4.7	4.7	4.7	4.6	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input
1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Table 22: Gross System Performance—MPS H05C, 5 Tons Gas Heat

Entering Indoor Air @ 80°F (26.7°C) dbE[1]												
wbE			71°F (21.7°C)			67°F (19.4°C)			63°F (17.2°C)			
CFM (L/s)			1980 (934)	1800 (850)	1530 (722)	1980 (934)	1800 (850)	1530 (722)	1980 (934)	1800 (850)	1530 (722)	
DR[1]			0.14	0.13	0.1	0.14	0.13	0.1	0.14	0.13	0.1	
Outdoor Dry Bulb Temperature °F (°C)	75 (23.9)	Total BTUH (kW)	72.5 (21.2)	71.2 (20.9)	69.2 (20.3)	66.3 (19.4)	65.1 (19.1)	63.3 (18.6)	61.1 (17.9)	60.0 (17.6)	58.4 (17.1)	
		Sens BTUH (kW)	36.2 (10.6)	34.6 (10.1)	32.1 (9.4)	45.4 (13.3)	43.4 (12.7)	40.4 (11.8)	51.5 (15.1)	49.2 (14.4)	45.8 (13.4)	
		Power (kW)	3.5	3.5	3.4	3.5	3.4	3.4	3.4	3.4	3.4	
	80 (26.7)	Total BTUH (kW)	71.1 (20.8)	69.8 (20.5)	67.9 (19.9)	64.9 (19.0)	63.7 (18.7)	62.0 (18.2)	59.7 (17.5)	58.6 (17.2)	57.0 (16.7)	
		Sens BTUH (kW)	36.4 (10.7)	34.8 (10.2)	32.4 (9.5)	45.7 (13.4)	43.7 (12.8)	40.6 (11.9)	51.8 (15.2)	49.5 (14.5)	46.0 (13.5)	
		Power (kW)	3.7	3.7	3.6	3.7	3.6	3.6	3.6	3.6	3.6	
	85 (29.4)	Total BTUH (kW)	69.5 (20.4)	68.3 (20.0)	66.4 (19.5)	63.3 (18.6)	62.2 (18.2)	60.5 (17.7)	58.1 (17.0)	57.1 (16.7)	55.5 (16.3)	
		Sens BTUH (kW)	36.4 (10.7)	34.8 (10.2)	32.3 (9.5)	45.7 (13.4)	43.6 (12.8)	40.6 (11.9)	51.8 (15.2)	49.4 (14.5)	46.0 (13.5)	
		Power (kW)	3.9	3.9	3.8	3.9	3.8	3.8	3.8	3.8	3.8	
	90 (32.2)	Total BTUH (kW)	67.8 (19.9)	66.6 (19.5)	64.8 (19.0)	61.7 (18.1)	60.6 (17.7)	58.9 (17.3)	56.4 (16.5)	55.4 (16.2)	53.9 (15.8)	
		Sens BTUH (kW)	36.0 (10.6)	34.4 (10.1)	32.0 (9.4)	45.3 (13.3)	43.3 (12.7)	40.2 (11.8)	51.4 (15.1)	49.1 (14.4)	45.6 (13.4)	
		Power (kW)	4.1	4.1	4.0	4.1	4.1	4.0	4.1	4.0	4.0	
	95 (35)	Total BTUH (kW)	66.0 (19.3)	64.8 (19.0)	63.1 (18.5)	59.8 (17.5)	**58.8 (17.2)**	57.2 (16.8)	54.6 (16.0)	53.7 (15.7)	52.2 (15.3)	
		Sens BTUH (kW)	35.3 (10.3)	33.7 (9.9)	31.4 (9.2)	44.6 (13.1)	**42.6 (12.5)**	39.6 (11.6)	50.7 (14.8)	48.4 (14.2)	45.0 (13.2)	
		Power (kW)	4.4	4.3	4.3	4.3	**4.3**	4.3	4.3	4.3	4.2	
	100 (37.8)	Total BTUH (kW)	64.1 (18.8)	62.9 (18.4)	61.2 (17.9)	57.9 (17.0)	56.9 (16.7)	55.3 (16.2)	52.7 (15.4)	51.8 (15.2)	50.3 (14.8)	
		Sens BTUH (kW)	34.3 (10.0)	32.7 (9.6)	30.4 (8.9)	43.5 (12.8)	41.6 (12.2)	38.7 (11.3)	49.6 (14.5)	47.4 (13.9)	44.1 (12.9)	
		Power (kW)	4.6	4.6	4.5	4.6	4.6	4.5	4.6	4.5	4.5	
	105 (40.6)	Total BTUH (kW)	62.0 (18.2)	60.9 (17.8)	59.2 (17.4)	55.8 (16.4)	54.8 (16.1)	53.3 (15.6)	50.6 (14.8)	49.7 (14.6)	48.4 (14.2)	
		Sens BTUH (kW)	32.9 (9.6)	31.4 (9.2)	29.2 (8.6)	42.1 (12.4)	40.3 (11.8)	37.4 (11.0)	48.2 (14.1)	46.1 (13.5)	42.9 (12.6)	
		Power (kW)	4.9	4.9	4.8	4.9	4.8	4.8	4.8	4.8	4.7	
	110 (43.3)	Total BTUH (kW)	59.8 (17.5)	58.7 (17.2)	57.1 (16.7)	53.6 (15.7)	52.7 (15.4)	51.2 (15.0)	48.4 (14.2)	47.6 (13.9)	46.3 (13.6)	
		Sens BTUH (kW)	31.2 (9.1)	29.8 (8.7)	27.7 (8.1)	40.4 (11.9)	38.6 (11.3)	35.9 (10.5)	46.5 (13.6)	44.5 (13.0)	41.4 (12.1)	
		Power (kW)	5.2	5.1	5.1	5.2	5.1	5.0	5.1	5.1	5.0	
	115 (46.1)	Total BTUH (kW)	57.5 (16.8)	56.5 (16.5)	54.9 (16.1)	51.3 (15.0)	50.4 (14.8)	49.0 (14.4)	46.1 (13.5)	45.3 (13.3)	44.0 (12.9)	
		Sens BTUH (kW)	29.2 (8.5)	27.9 (8.2)	25.9 (7.6)	38.4 (11.3)	36.7 (10.8)	34.1 (10.0)	44.5 (13.0)	42.5 (12.5)	39.5 (11.6)	
		Power (kW)	5.5	5.4	5.4	5.5	5.4	5.3	5.4	5.4	5.3	
	120 (48.9)	Total BTUH (kW)	55.0 (16.1)	54.0 (15.8)	52.6 (15.4)	48.8 (14.3)	48.0 (14.1)	46.7 (13.7)	43.6 (12.8)	42.9 (12.6)	41.7 (12.2)	
		Sens BTUH (kW)	26.8 (7.9)	25.6 (7.5)	23.8 (7.0)	36.1 (10.6)	34.5 (10.1)	32.0 (9.4)	42.2 (12.4)	40.3 (11.8)	37.5 (11.0)	
		Power (kW)	5.8	5.7	5.7	5.8	5.7	5.6	5.7	5.7	5.6	
	125 (51.7)	Total BTUH (kW)	52.4 (15.4)	51.5 (15.1)	50.1 (14.7)	46.2 (13.6)	45.4 (13.3)	44.2 (12.9)	41.0 (12.0)	40.3 (11.8)	39.2 (11.5)	
		Sens BTUH (kW)	24.1 (7.1)	23.0 (6.7)	21.4 (6.3)	33.4 (9.8)	31.9 (9.3)	29.7 (8.7)	39.5 (11.6)	37.7 (11.0)	35.1 (10.3)	
		Power (kW)	6.1	6.1	6.0	6.1	6.0	5.9	6.1	6.0	5.9	

Note: DR — Depression Ratio; dbE — Entering Air Dry Bulb; wbE — Entering Air Wet Bulb; Total — Total Capacity × 1000 BTUH; Sens — Sensible Capacity × 1000 BTUH Power–KW input

1. When the entering air dry bulb is other than 80°F (27°C), adjust the sensible capacity from the table by adding (1.10 × CFM × (1 – DR) × (dbE – 80))

Airflow Performance

Table 23: Airflow Performance—MPS A03C–A05C

Unit Model: MPS-	Motor Speed from Factory		Heating Input BTU/hr (kW)	Manufacturer Recommended Air-Flow Range (Min/ Max) CFM	Blower Size/Motor HP (w) # of Speeds	Motor Speed		External Static Pressure—Inches W.C. (kPa)							
	Cool	Heat						0.1 (.02)	0.2 (.05)	0.3 (.07)	0.4 (.10)	0.5 (.12)	0.6 (.15)	0.7 (.17)	0.8 (.20)
CFM (L/s) Air Delivery/RPM/Watts—208 Volts															
A03C	Low	Low	80,000 (23.45)	1050/1350	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1210 (571)	1193 (563)	1175 (555)	1155 (545)	1125 (531)	1075 (507)	1015 (479)	925 (437)
							Watts	450	400	395	385	380	375	370	360
		Med	120,000 (35.17)			Med	CFM	1515 (715)	1500 (708)	1475 (696)	1450 (684)	1405 (663)	1350 (637)	1275 (602)	1180 (557)
							Watts	525	515	510	505	490	475	460	445
						High	CFM	1680 (793)	1650 (779)	1625 (767)	1580 (746)	1530 (722)	1460 (689)	1390 (656)	1280 (604)
							Watts	650	640	630	610	580	560	545	515
A04C	Med			1400/1800	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1210 (571)	1193 (563)	1175 (555)	1155 (545)	1125 (531)	1075 (507)	1015 (479)	925 (437)
							Watts	450	400	395	385	380	375	370	360
		Med	100,000 (29.31)			Med	CFM	1515 (715)	1500 (708)	1475 (696)	1450 (684)	1405 (663)	1350 (637)	1275 (602)	1180 (557)
							Watts	525	515	510	505	490	475	460	445
		High	135,000 (39.56)			High	CFM	1680 (793)	1650 (779)	1625 (767)	1580 (746)	1530 (722)	1460 (689)	1390 (656	1280 (604)
							Watts	650	640	630	610	580	560	545	515
A05C	Med	Low	100,000 (29.31)	1750/2250	10×10 1 HP (745 3 Speed Motor	Low	CFM	1575 (743)	1536 (725)	1496 (706)	1457 (688)	1417 (669)	1377 (650)	1338 (631)	1298 (613)
							Watts	297	314	330	347	364	381	397	414
						Med	CFM	1985 (937)	1954 (922)	1919 (906)	1876 (885)	1824 (861)	1759 (830)	1679 (792)	1581 (746)
							Watts	535	553	574	593	606	609	599	572
		High	135,00 (39.56)			High	CFM	2431 (1147)	2372 (1119)	2306 (1088)	2228 (1051)	2138 (1009)	2032 (959)	1907 (900)	1762 (832)
							Watts	970	981	964	926	872	806	736	665
CFM (L/s) Air Delivery/RPM/Watts—230 Volts															
A03C	Low	Low	80,000 (23.45)	1050/1350	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1400 (661)	1375 (649)	1360 (642)	1335 (630)	1305 (616)	1255 (592)	1210 (571)	1100 (519)
							Watts	470	460	455	450	440	435	425	410
		Med	120,000 (35.17)			Med	CFM	1685 (795)	1620 (765)	1580 (746)	1550 (732)	1500 (708)	1430 (675)	1350 (637)	1230 (580)
							Watts	635	600	580	570	550	535	505	475
						High	CFM	1870 (883)	1830 (864)	1790 (845)	1730 (816)	1660 (783)	1580 (746)	1500 (708)	1375 (649)
							Watts	780	760	740	700	660	635	600	555
A04C	Med			1400/1800	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1400 (661)	1375 (649)	1360 (642)	1335 (630)	1305 (616)	1255 (592)	1210 (571)	1100 (519)
							Watts	470	460	455	450	440	435	425	410
		Med	100,000 (29.31)			Med	CFM	1685 (795)	1620 (765)	1580 (746)	1550 (732)	1500 (708)	1430 (675)	1350 (637)	1230 (580)
							Watts	635	600	580	570	550	535	505	475
		High	135,000 (39.56)			High	CFM	1870 (883)	1830 (864)	1790 (845)	1730 (816)	1660 (783)	1580 (746)	1500 (708)	1375 (649)
							Watts	780	760	740	700	660	635	600	555
A05C	Med	Low	100,000 (29.31)	1750/2250	10×10 1 HP (745) 3 Speed Motor	Low	CFM	1575 (743)	1536 (725)	1496 (706)	1457 (688)	1417 (669)	1377 (650)	1338 (631)	1298 (613)
							Watts	297	314	330	347	364	381	397	414
						Med	CFM	1985 (937)	1954 (922)	1919 (906)	1876 (885)	1824 (861)	1759 (830)	1697 (792)	1581 (746)
							Watts	535	553	574	593	606	609	599	572
		High	135,000 (39.56)			High	CFM	2431 (1147)	2372 (1119)	2306 (1088)	2228 (1051)	2138 (1009)	2032 (959)	1907 (900)	1762 (832)
							Watts	970	981	964	926	872	806	736	665
CFM (L/s) Air Delivery/RPM/Watts—460 Volts															
A03C	Low	Low	80,000 (23.45)	1050/1350	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1400 (661)	1375 (649)	1360 (642)	1335 (630)	1305 (616)	1255 (592)	1210 (571)	1100 (519)
							Watts	470	460	455	450	440	435	425	410
		Med	120,000 (35.17)			Med	CFM	1685 (795)	1620 (765)	1580 (746)	1550 (732)	1500 (708)	1430 (675)	1350 (637)	1230 (580)
							Watts	635	600	580	570	550	535	505	475
						High	CFM	1870 (883)	1830 (864)	1790 (845)	1730 (816)	1660 (783)	1580 (746)	1500 (708)	1375 (649)
							Watts	780	760	740	700	660	635	600	555
A04C	High			1400/1800	10×10 1/2 HP (373) 3 Speed Motor	Low	CFM	1400 (661)	1375 (649)	1360 (642)	1335 (630)	1305 (616)	1255 (592)	1210 (571)	1100 (519)
							Watts	470	460	455	450	440	435	425	410
		Med	100,000 (29.31)			Med	CFM	685 (795)	1620 (765)	1580 (746)	1550 (732)	1500 (708)	1430 (675)	1350 (637)	1230 (580)
							Watts	635	600	580	570	550	535	505	475
		High	135,000 (39.56)			High	CFM	1870 (883)	1830 (864)	1790 (845)	1730 (816)	1660 (783)	1580 (746)	1500 (708)	1375 (649)
							Watts	780	760	740	700	660	635	600	555

( ) Designates Metric Conversions

Table 24: Airflow Performance—MPS A03C, 208V, 230V, 460V

Airflow Performance – 3 Ton [10.55 Kw] Three Phase Belt Drive

Air Flow CFM [L/s]	Capacity 3 Ton [10.55 kW] / Voltage 208/230/460/575, 3-Phase / External Static Pressure - Inches of Water [kPa]																											
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
900 [425]	—	—	—	—	699	223	765	261	827	292	886	318	941	338	993	352	1042	360	1087	362	1129	358	1168	348	1203	332	1235	310	1264	282
1000 [472]	—	—	662	228	717	258	781	293	842	323	899	346	952	364	1002	376	1049	381	1093	381	1133	374	1170	362	1203	344	1233	320	1260	289
1100 [519]	—	—	667	275	737	295	798	328	857	355	912	377	964	392	1012	401	1057	404	1099	402	1137	393	1172	378	1204	358	1232	331	1257	298
1200 [566]	643	278	693	298	756	334	817	365	873	390	927	409	976	422	1023	428	1066	429	1106	424	1143	413	1176	396	1205	373	1232	344	1255	309
1300 [614]	661	316	716	341	777	376	835	404	890	426	942	443	990	453	1035	458	1076	456	1114	449	1149	435	1180	416	1208	391	1232	359	1254	322
1400 [661]	669	352	739	387	799	419	855	445	908	465	958	479	1004	487	1047	489	1087	485	1123	475	1156	460	1185	438	1211	410	1234	377	1253	337
1500 [708]	702	399	763	434	821	464	876	487	927	505	975	517	1019	523	1060	522	1098	516	1132	504	1163	486	1191	462	1215	432	1236	396	1254	354

NOTE: L-DRIVE left of bold line, M-DRIVE right of bold line

Drive Package	L						M					
Motor H.P. [W]	1/2 [373]						1/2 [373]					
Blower Sheave	6.9" Pitch Diameter						6.4" Pitch Diameter					
Motor Sheave	2.4" – 3.4" Pitch Diameter						3.4" – 4.4" Pitch Diameter					
Turns Open	0	1	**2**	3	4	5	0	1	2	**3**	4	5
RPM	910	869	**818**	775	728	682	1176	1145	1108	**1060**	996	968

Component Air Resistance

Component	Standard Indoor Airflow – CFM [L/s]					
	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [850]	2000 [944]
	Resistance – Inches Water [kPa]					
Wet Coil	0.035	0.040	0.060	0.070	0.085	0.100
Downflow	0.055	0.060	0.066	0.072	0.080	0.086
R.S.I. Economizer	0.05	0.06	0.07	0.08	0.09	0.10
R.A. Damper						

NOTES:
1. Performance shown with dry coil & standard 2" [50.8 mm] filters.
2. Standard CFM @ .075 ibs./cu.ft.
3. Motor efficiency = 80%
4. BHP = Watts × Motor Efficiency/746.
5. Add component resistance to duct static to determine E.S.P as shown on charts

[ ] Designates Metric Conversions

Table 25: Airflow Performance—MPS A04C, 208V, 230V, 460V

Airflow Performance – 4 Ton [14.07 Kw] Three Phase Belt Drive

Air Flow CFM [L/s]	Capacity 4 Ton [14.07 kW] Voltage 208/230/460/575, 3-Phase External Static Pressure - Inches of Water [kPa]																													
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
1200 [566]	—	—	—	—	—	—	817	425	879	440	940	456	999	475	1057	496	1113	519	1168	545	1221	572	1272	602	1322	634	1371	669	1420	704
1300 [614]	—	—	—	—	—	—	838	437	899	457	958	479	1015	503	1071	529	1126	558	1178	589	1230	622	1279	657	1327	695	1374	734	1421	773
1400 [661]	—	—	—	—	806	418	861	457	919	482	976	510	1032	539	1086	571	1138	605	1189	641	1239	680	1286	720	1333	763	1377	808	1421	853
1500 [708]	—	—	—	—	825	458	883	486	940	517	995	549	1048	584	1101	622	1151	661	1200	703	1248	746	1294	792	1338	841	1382	890	1426	939
1600 [755]	—	—	798	449	849	490	905	523	960	559	1013	598	1065	638	1115	681	1164	725	1211	772	1257	821	1301	873	1343	926	1385	979	1427	1032
1700 [802]	—	—	817	493	873	530	928	569	981	611	1032	654	1082	700	1130	748	1177	798	1222	851	1266	905	1308	962	1349	1021	1390	1080	1431	1139
1800 [850]	791	490	844	537	898	579	950	624	1002	670	1051	719	1099	771	1146	824	1190	880	1234	937	1276	997	1316	1059	1355	1124	1394	1189	—	—
1900 [897]	816	543	870	589	923	637	973	687	1023	739	1070	793	1116	850	1161	908	1204	969	1245	1033	1285	1098	1324	1166	1361	1235	1398	1304	—	—
2000 [944]	845	599	897	650	947	703	996	758	1044	816	1089	875	1134	937	1176	1002	1217	1068	1257	1137	1295	1207	1332	1280	1367	1355	—	—	—	—

NOTE: L-DRIVE left of bold line, M-DRIVE right of bold line

Drive Package	L						M					
Motor H.P. [W]	1/2 [373]						3/4 [559]					
Blower Sheave	6.9" Pitch Diameter						6.4" Pitch Diameter					
Motor Sheave	2.8" – 3.8" Pitch Diameter						3.4" – 4.4" Pitch Diameter					
Turns Open	0	1	**2**	3	4	5	0	1	2	**3**	4	5
RPM	1029	984	**950**	915	855	816	1281	1207	1174	**1141**	1111	1071

Component Air Resistance

Component	Standard Indoor Airflow – CFM [L/s]					
	1000 [472]	1200 [566]	1400 [661]	1600 [755]	1800 [850]	2000 [944]
	Resistance – Inches Water [kPa]					
Wet Coil	0.035	0.040	0.060	0.070	0.085	0.100
Downflow	0.055	0.060	0.066	0.072	0.080	0.086
R.S.I. Economizer	0.05	0.06	0.07	0.08	0.09	0.10

NOTES:
1. Performance shown with dry coil & standard 2" [50.8 mm] filters.
2. Standard CFM @ .075 ibs./cu.ft.
3. Motor efficiency = 80%
4. BHP = Watts × Motor Efficiency/746.
5. Add component resistance to duct static to determine E.S.P as shown on charts

[ ] Designates Metric Conversions

Table 26: Airflow Performance—MPS A05C, 208V, 230V, 460V

Airflow Performance – 5 Ton [17.6 Kw] Three Phase Belt Drive

Air Flow CFM [L/s]	Capacity 5 Ton [17.6 kW] 14 SEER Voltage 208/230/460/575, 3-Phase External Static Pressure - Inches of Water [kPa]																													
	0.1 [.02]		0.2 [.05]		0.3 [.07]		0.4 [.10]		0.5 [.12]		0.6 [.15]		0.7 [.17]		0.8 [.20]		0.9 [.22]		1.0 [.25]		1.1 [.27]		1.2 [.30]		1.3 [.32]		1.4 [.35]		1.5 [.37]	
	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W	RPM	W
1400 [661]	—	—	—	—	—	—	784	466	835	497	886	533	935	574	983	621	1030	674	1077	732	1122	795	1166	864	1209	939	1251	1019	1292	1104
1500 [708]	—	—	—	—	—	—	800	484	850	519	899	558	947	604	994	655	1040	711	1085	773	1129	841	1172	914	1214	992	1255	1076	1295	1166
1600 [755]	—	—	—	—	766	478	816	511	865	549	913	593	960	643	1006	698	1051	758	1095	824	1137	895	1179	972	1220	1055	1260	1143	1300	1231
1700 [802]	—	—	—	—	785	509	833	546	881	589	928	637	974	690	1018	749	1062	813	1105	883	1146	959	1187	1040	1227	1126	1265	1218	1303	1310
1800 [850]	—	—	755	505	804	550	851	591	898	637	943	689	988	747	1031	810	1074	878	1115	952	1156	1031	1195	1116	1234	1207	1271	1302	1308	1397
1900 [897]	716	491	776	560	823	600	869	645	915	695	959	751	1003	812	1045	879	1086	951	1127	1029	1166	1113	1204	1202	1242	1296	1278	1396	1314	1496
2000 [944]	745	562	797	615	843	658	889	707	933	762	976	821	1018	887	1059	958	1099	1034	1139	1116	1177	1203	1214	1296	1250	1394	1285	1498	1320	1602
2100 [991]	773	637	819	679	864	726	908	779	951	837	993	901	1034	970	1074	1045	1113	1125	1151	1211	1188	1303	1224	1399	1259	1502	1293	1609	—	—
2200 [1038]	797	706	842	751	886	803	929	860	971	922	1011	990	1051	1063	1090	1142	1128	1226	1165	1316	1200	1411	1235	1512	1269	1618	—	—	—	—
2300 [1085]	822	783	865	833	908	888	950	949	990	1015	1030	1087	1069	1164	1106	1247	1143	1335	1179	1429	1213	1528	1247	1633	1279	1743	—	—	—	—
2400 [1133]	847	870	889	924	931	983	971	1048	1011	1118	1049	1194	1087	1275	1123	1362	1159	1454	1193	1551	1227	1655	1259	1763	1291	1878	—	—	—	—
2500 [1179]	873	966	914	1023	954	1087	994	1155	1032	1229	1069	1309	1106	1394	1141	1485	1175	1581	1209	1683	1241	1790	1272	1903	—	—	—	—	—	—

NOTE: L-DRIVE left of bold line, M-DRIVE right of bold line

Drive Package	L						M					
Motor H.P. [W]	3/4 [559]						1 [746]					
Blower Sheave	6.9" Pitch Diameter						6.9" Pitch Diameter					
Motor Sheave	2.8" – 3.8" Pitch Diameter						4.0" – 5.0" Pitch Diameter					
Turns Open	0	1	**2**	3	4	5	0	1	2	**3**	4	5
RPM	967	936	**900**	855	816	769	1248	1203	1163	**1123**	1078	1042

Component Air Resistance

Component	Standard Indoor Airflow – CFM [L/s]					
	1600 [755]	1800 [850]	2000 [944]	2200 [1038]	2400 [1133]	2600 [1227]
	Resistance – Inches Water [kPa]					
Wet Coil	0.070	0.085	0.100	0.110	0.120	0.125
Downflow	0.072	0.080	0.086	0.093	0.100	0.107
R.S.I. Economizer	0.08	0.09	0.10	0.11	0.12	0.13
R.A. Damper						

NOTES:
1. Performance shown with dry coil & standard 2" [50.8 mm] filters.
2. Standard CFM @ .075 ibs./cu.ft.
3. Motor efficiency = 80%
4. BHP = Watts × Motor Efficiency/746.
5. Add component resistance to duct static to determine E.S.P as shown on charts

[ ] Designates Metric Conversions

Table 27: Accessory Weights

Accessory	Daikin Part Number	Shipping Weight lbs (kg)	Operating Weight lbs (kg)
Economizer, Analog Controls, 3–5 ton, Vert/Horiz	MXRD-01RECAM3	70 (32)	60 (27)
Economizer, DDC Controls, 3–5 ton, Vert/Horiz	MXRD-01RKCCM3	70 (32)	60 (27)
OA damper, 3–5 ton, Manual	MXRF-FGA1	11 (5)	9 (4)
OA damper, Analog Controls, 3–5 ton, Motorized	MXRF-FGB1	13 (6)	11 (5)
Power Exhaust Kit, 3–5 Ton 208/230V	MXRX-BGF06C	70 (32)	60 (27)
Power Exhaust Kit, 3–5 Ton 460V	MXRX-BGF06D	70 (32)	60 (27)
14" Roof Curb, 3–5 Ton	RXKG-CBH14	92 (42)	88 (40)
Receptacle Outlet	RXRX-AN01	N/A	N/A
Thermostat Guard	113130101	N/A	N/A
7-Day Programmable Stat	113129901	N/A	N/A
Ionization Smoke Detector	113126601	N/A	N/A
CO_2 Sensor	RXRX-AR02	N/A	N/A
Dual Enthalpy Kit	RXRX-AV02	N/A	N/A

Economizers

Economizers: 3–5 Tons [10.6–17.6 kW]

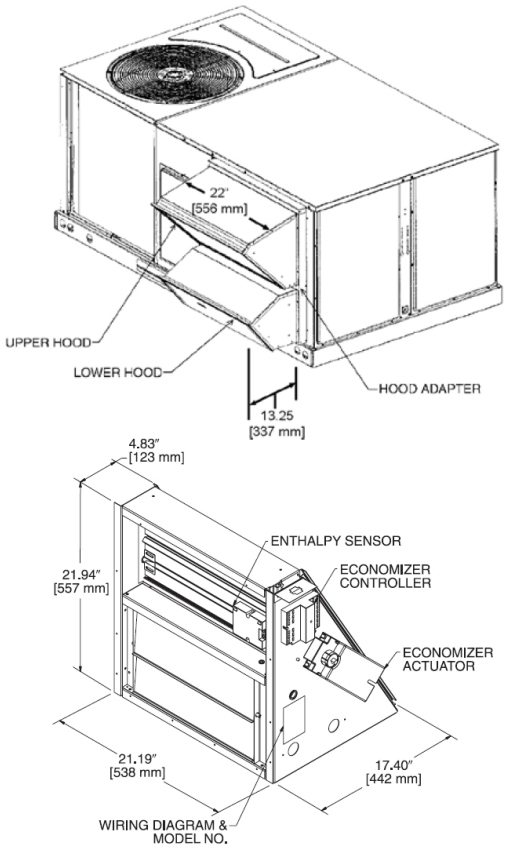
3-5 Ton [10.6-17.6 kW] Models Single Enthalpy with Barometric Relief

Dual Enthalpy Kit 3-5 Ton [1 0.6-1 7.6 kW] Models

3-5 Ton [1 0.6-1 7.6 kW] Models Optional CO_2 Sensor

- Features economizer controller
- Pre-configured—no field adjustments necessary
- Available factory installed or field accessory
- Standard barometric relief damper provided
- Gear driven direct drive actuator
- Single enthalpy with dual enthalpy upgrade kit
- Fully modulating (0-100%)
- CO_2 input sensor available (field installed)
- Low leakage dampers
- Economizer slips in complete for downflow or horizontal duct application
- Horizontal or downflow applications
- Field assembled hood ships with economizer
- Slip-in design for easy installations
- Field installed power exhaust available
- Plug-in polarized electrical connections

Figure 33: Economizer: MPS A03C – A05C

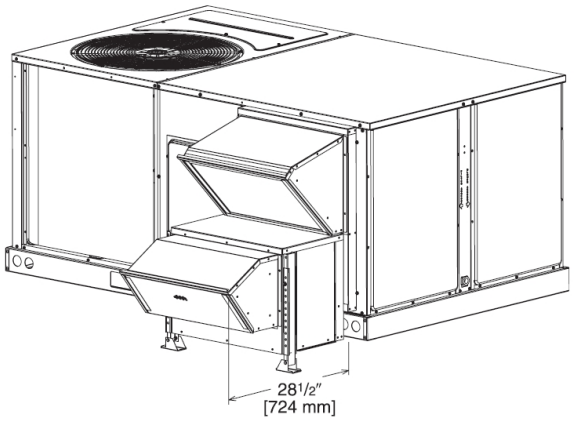


Fresh Air Dampers and Power Exhaust

Integral Power Exhaust For Economizer: 3–5 Tons [10.6–17.6 Kw] (Field Installed Only)

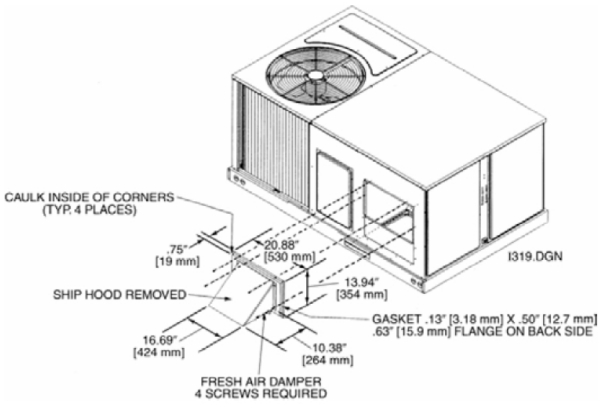
- For economizer controller
- Downflow or horizontal applications
- Requires separate power supply with disconnect
- Adjustable switch on economizer, factory preset to energize power exhaust at 95% outside air position
- Polarized plug connects power exhaust relay to economizer

Figure 34: Integral Power Exhaust Economizer: MPS A03C – A05C



Fresh Air Damper Kit for 3–5 Ton Units [10.6–17.6 Kw]

Figure 35: Damper Kit: MPS A03C – A05C

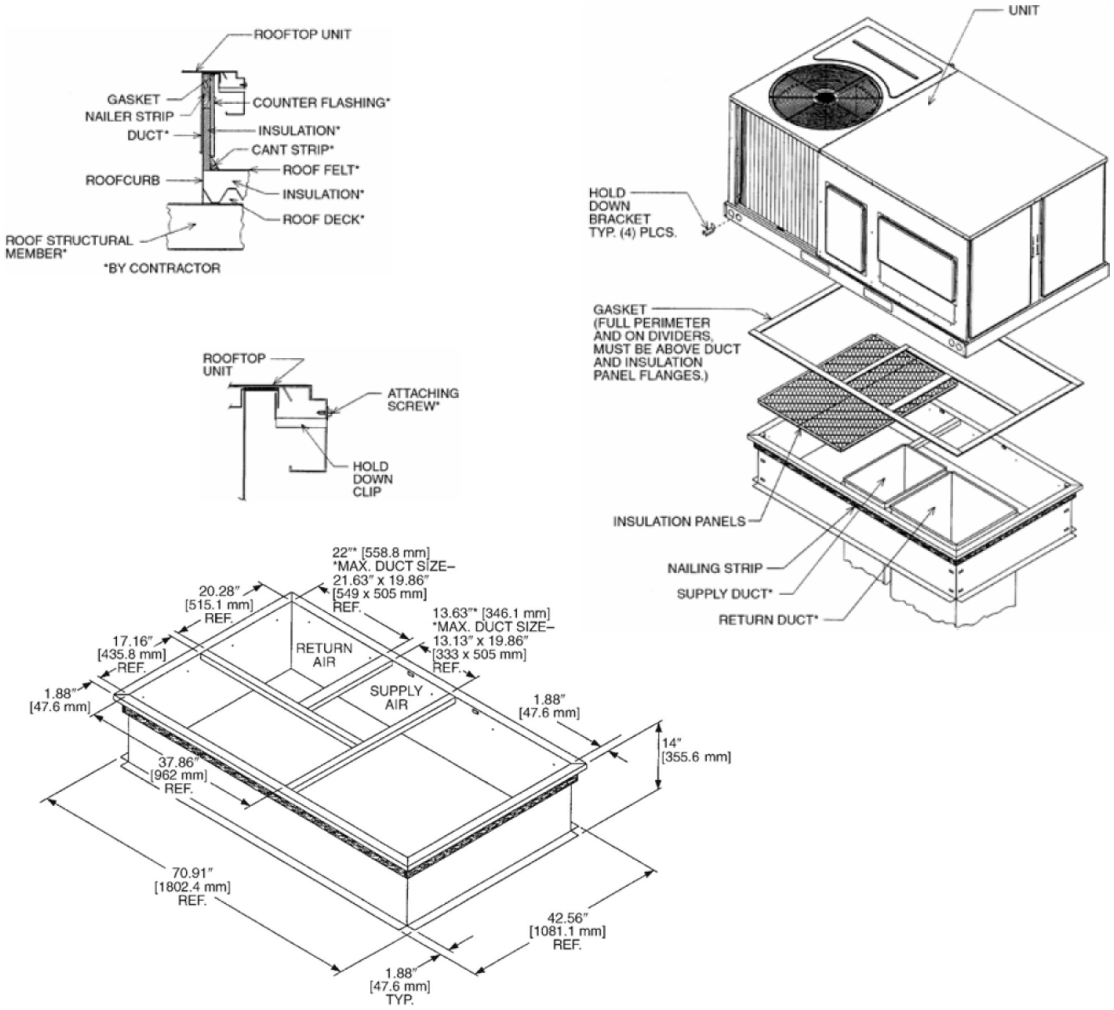


Roof Curbs

Roof Curbs (Full Perimeter): 3–5 Tons [10.6–17.6 kW]

- One available height (14" [356 mm]) for all models.
- 2" [51 mm] × 4" [102 mm] nailer provided
- Quick assembly corners for easy installation
- Insulating panels provided
- Opening provided in bottom pan to match the "Thru-the-Curb" electrical connection opening provided on the unit
- Sealing gasket (28" [711 mm]) provided with roof curb
- 18 gauge galvanized steel base pan

Figure 36: Typical Roof Curb Installation: MPS A03C – A05C



Furnace Section Controls and Ignition System

Normal Furnace Operating Sequence

This unit is equipped with an integrated direct spark ignition control.

1. The thermostat calls for heat.
2. The control board will run a self check to verify that the limit control and manual reset overtemperature control are closed and that the pressure switch is open.
3. Upon closure of the pressure switch, the control board energizes the induced draft blower for a 15 second prepurge.
4. After the 15 second prepurge, the gas valve opens and the spark is initiated for a seven second trial for ignition.
5. Burners ignite and flame sensor proves all burners have lit.
6. The circulating air blower is energized after 30 seconds.
7. The control board enters a normal operation loop in which all safety controls are monitored continuously.
8. Thermostat is satisfied and opens.
9. The gas valve is de-energized and closes, shutting down the burner flame.
10. The control board will de-energize the inducer after a five second post purge.
11. The circulating air blower is de-energized after 90 seconds.

The integrated control is a three ignition system.

After a total of three cycles without sensing main burner flame, the system goes into a 100% lockout mode. After one hour, the ignition control repeats the prepurge and ignition cycles for three tries and then goes into 100% lockout mode again. It continues this sequence of cycles and lockout each hour until ignition is successful or power is interrupted. During the lockout mode, neither the ignitor or gas valve will be energized until the system is reset by turning the thermostat to the “OFF” position or interrupting the electrical power to the unit for three seconds or longer. The induced draft blower and main burner will shut off when the thermostat is satisfied.

The circulating air blower will start and run on the heating speed if the thermostat fan switch is in the “ON” position.

The integrated furnace control is equipped with diagnostic LED. The LED is lit continuously when there is power to the control, with or without a call for heat. If the LED is not lit, there is either no power to the control or there is an internal component failure within the control, and the control should be replaced.

If the control detects the following failures, the LED will flash on for approximately 1/4 second, then off for 3/4 second for designated failure detections:

1. Flash: Failed to detect flame within the three tries for ignition.
2. Flash: Pressure switch or induced draft blower problem detected.
3. Flash: High limit or auxiliary limit open.
4. Flash: Flame sensed and gas valve not energized or flame sensed with no “W” signal.
5. Flash: Overtemperature switch open.

Operating Instructions

⚠ DANGER

Never test for gas leaks with an open flame. It can cause an explosion or fire resulting in property damage, personal injury or death. Use a commercially available soap solution made specifically for the detection of leaks to check all connections, as specified in the "Mechanical Installation" section of these instructions.

⚠ DANGER

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

This unit is equipped with integrated furnace control. This device lights the main burners each time the room thermostat (closes) calls for heat. See operating instructions on the back of the furnace/controls access panel.

To Start The Furnace

⚠ DANGER

The spark ignitor and ignition lead from the ignition control are high voltage. Keep hands or tools away to prevent electrical shock. Shut off electrical power before servicing any of the controls. Failure to adhere to this warning can result in personal injury or death.

1. STOP! Read the safety information on the Operating Instructions label located on this unit.
2. Set the thermostat to its lowest setting.
3. Turn OFF all electric power to the unit.
4. This unit does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do NOT try to light the burner by hand.
5. Remove control door/access panel.
6. Move switch to the "OFF" position.
7. Wait five minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP!
   - Do not try to light any unit.
   - Do not touch any electric switch; do not use any phone in your building.
   - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
   - If you cannot reach your gas supplier, call the fire department.

If you don't smell gas, go to the next step.

8. Move "OFF" position to "ON" position.
9. Replace the control door.
10. Turn ON all electric power to the unit.
11. Set the thermostat to the desired setting.
12. If the unit will not operate, follow the instructions below on how to shut down the furnace.

The initial start-up on a new installation may require the control system to be energized for some time until air has bled through the system and fuel gas is available at the burners.

To Shut Down Furnace

⚠ DANGER

Should overheating occur or the gas supply fail to shut off, shut off the manual gas valve to the unit before shutting off the electrical supply. Failure to do so can result in an explosion or fire causing property damage, severe personal injury

1. Set the thermostat to the lowest setting.
2. Turn OFF all electric power to the unit if service is to be performed.
3. Remove control door.
4. Move switch to the "OFF" position.
5. Replace control door.

Burners

Burners for these units have been designed so that field adjustment is not required. Burners are tray-mounted and accessible for easy cleaning when required.

Manual Reset Overtemperature Control

⚠ DANGER

Do not jumper this device! Do not reset the overtemperature control without taking corrective action to assure that an adequate supply of combustion air is maintained under all conditions of operation. Failure to do so can result in carbon monoxide poisoning or death. Replace this control only with the identical replacement part.

Two manual reset overtemperature controls (one on 80,000 Btuh) are located on the burner shield. These devices sense blockage in the heat exchanger or insufficient combustion air. This shuts off the main burners if excessive temperatures occur in the burner compartment.

Operation of this control indicates an abnormal condition. Therefore, the unit should be examined by a qualified installer, service agency, or the gas supplier before being placed back into operation.

Pressure Switch

This furnace has a pressure switch for sensing a blocked exhaust or a failed induced draft blower. It is normally open and closes when the induced draft blower starts, indicating air flow through the combustion chamber.

Limit Control

⚠ DANGER

Do not jumper this device! Doing so can cause a fire or explosion resulting in property damage, personal injury or death.

The supply air high temperature limit cut-off is set at the factory and cannot be adjusted. It is calibrated to prevent the air temperature leaving the furnace from exceeding the maximum outlet air temperature.

Important: Replace this control only with the identical replacement part.

Dehumidification Control

With the factory installed reheat option, in addition to a thermostat or space temperature sensor that is normally present, an indoor relative humidity sensor is installed in the occupied space and connected to the Rooftop Unit DDC Controller which (see illustration) then controls the capacity of the cooling coil to remove moisture from the supply air and maintain space relative humidity below an adjustable limit. The default value is the ASHRAE recommended limit of 60% RH.

With this option, a refrigerant reheat coil is installed downstream from the evaporator coil. When the space humidity is too high and reheat is energized, this coil uses some of the heat that is normally rejected to the outside by the condenser coil to instead reheat the cold air from the evaporator coil just enough to avoid overcooling the space. Providing “neutral air” to the occupied space extends the run-time of the unit to provide better dehumidification than an air conditioner without this option.

Because the demand for dehumidification can be different from the cooling demand, the unit will first satisfy the demand for cooling and then if the space humidity is still too high, reheat mode is energized. When in reheat mode, the supply air leaving the unit will be near the entering air temperature, but at a much lower humidity. The unit will exit the reheat mode when the humidity setpoint is satisfied; or if the load is increased, it will return to normal cooling mode. Reheat is not available during the gas heating mode. For two-stage units with independent refrigerant circuits, reheat is only available on the first stage.

Figure 37 shows the refrigerant path during the normal cooling mode. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor where it is elevated to a higher pressure and temperature. The superheated refrigerant vapor is then rejected and the refrigerant condenses into a subcooled liquid where the process repeats itself.

Figure 37: Refrigerant Path – Normal Cooling

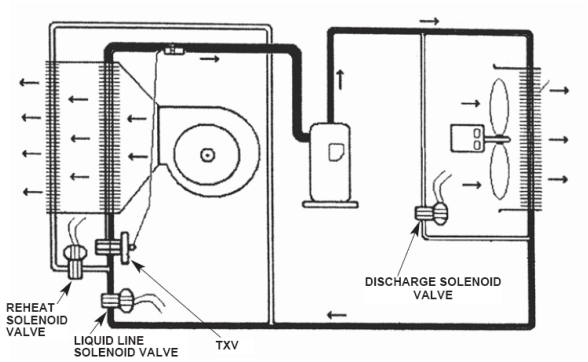
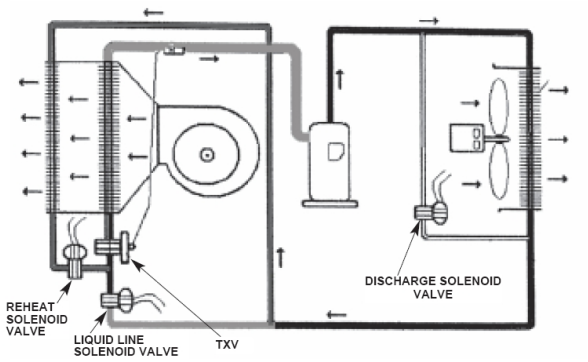


Figure 38 shows the refrigerant path during the reheat mode. When the reheat cycle is energized, a solenoid valve downstream of the reheat coil opens, a solenoid valve ahead of the TXV closes, and a solenoid valve in the compressor discharge line opens. The liquid refrigerant leaves the TXV with the sudden pressure drop causing the liquid to expand to a vapor and absorbing the heat from the supply air going through the evaporator coil. The refrigerant vapor then travels to the compressor where it is elevated to a higher pressure and temperature. The refrigerant next carries the heat to a parallel path between the outside condenser coil and a bypass circuit. Some of the heat is rejected outdoors. The ratio of heat rejected outdoors versus indoors is controlled by a variable frequency drive (OFMC) on the outdoor fan that monitors the liquid line temperature of the outdoor coil. This 2-phase refrigerant vapor is then sent to the reheat coil. As the refrigerant travels through the reheat coil it condenses into a subcooled liquid where the process repeats itself.

Figure 38: Refrigerant Path – Reheat Mode



During reheat mode the outdoor fan motor controller (OFMC) slows the outdoor fan(s) to increase the discharge pressure/temperature to maintain an optimized amount of reheat required to provide neutral air to the occupied space. The factory setting for the outdoor fan motor controller is 90°F which will provide neutral air +1 to -5°F from the entering air temperature (example if the entering or return air temperature is 75°F the leaving or supply air temperature will be 76° to 70°F during the reheat mode. If field adjustment is required to raise or lower the leaving air temperature this may be accomplished by turning the temperature control dial on the outdoor fan motor controller (OFMC). Turning the dial to a higher temperature setting will raise the leaving or supply air temperature and turning the dial to a lower setting will reduce the leaving or supply temperature.

Figure 39: Dehumidification Controller

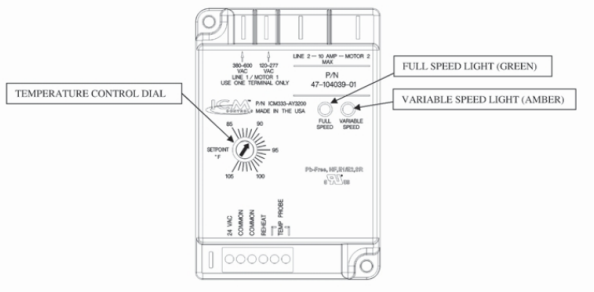
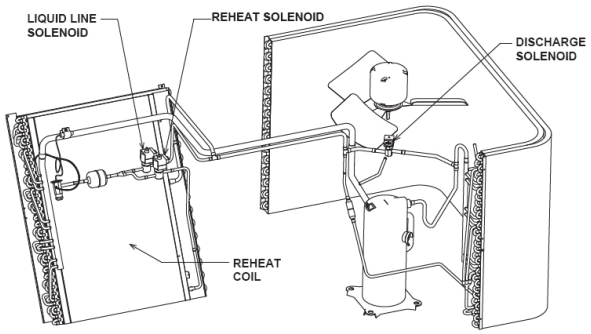


Figure 40: Solenoid Locations



General

Advise The Customer

1. Change the air filters regularly. The heating system operates better, more efficiently and more economically.
2. Except for the mounting platform, keep all combustible articles three feet from the unit and exhaust system.
3. **Important:** Replace all blower doors and compartment cover after servicing the unit. Do not operate the unit without all panels and doors securely in place.
4. Do not allow snow or other debris to accumulate in the vicinity of the unit.

Unit Maintenance

Furnace Section

⚠ DANGER

Power supply to unit must be disconnected before making field connections. To avoid electrical shock, personal injury or death, be sure to rigorously adhere to field wiring procedures regarding proper lockout and tagout of components.

⚠ DANGER

Holes in the exhaust transition or heat exchanger can cause toxic fumes to enter the building. The exhaust transition or heat exchanger must be replaced if they have holes or cracks in them. Failure to do so can cause carbon monoxide poisoning resulting in personal injury or death.

⚠ DANGER

Power supply to unit must be disconnected before making field connections. To avoid electrical shock, personal injury or death, be sure to rigorously adhere to field wiring procedures regarding proper lockout and tagout of components.

The unit's furnace should operate for many years without excessive scale build-up in flue passageways; however, it is recommended that a qualified installer, service agency, or the gas supplier annually inspect the flue passageways, the exhaust system and the burners for continued safe operation, paying particular attention to deterioration from corrosion or other sources.

If during inspection the flue passageways and exhaust system are determined to require cleaning, the following procedures should be followed (by a qualified installer, service agency, or gas supplier):

1. Turn OFF the electrical power to the unit and set the thermostat to the lowest temperature.
2. Shut OFF the gas supply to the unit either at the meter or at manual valve in the supply piping.
3. Remove the furnace controls access panel and the control box cover. Disconnect the gas supply piping from the gas valve.
4. Disconnect the gas supply piping from the gas valve.
5. Disconnect the wiring to the induced draft blower motor, gas valve, flame sensor, and flame roll-out control, and ignitor cable. Mark all wires disconnected for proper reconnection.
6. Remove the screws (4) connecting the burner tray to the heat exchanger mounting panel.
7. Remove the burner tray and the manifold assembly from the unit.
8. Remove the screws (5) connecting the induced draft blower to the collector box and screws (18) connecting the collector box to the heat exchanger center panel. Remove the induced draft blower and the collector box from the unit.
9. Remove the screws (3) connecting the divider plate to the heat exchanger center panel.
10. Remove the turbulators from inside the heat exchangers by inserting the blade of a screwdriver under the locking tabs. Pop the tabs out of the expanded grooves of the heat exchanger. Slide the turbulators out of the heat exchangers.
11. Direct a water hose into the outlet of the heat exchanger top. Flush the inside of each heat exchanger tube with water. Blow out each tube with air to remove excessive moisture.
12. Reassemble (steps 1 through 10 in reverse order). Be careful not to strip out the screw holes used to mount the collector box and inducer blower. Replace inducer blower gasket and collector box gasket with factory replacements if damaged.

The manufacturer recommends that a qualified installer, service agency or the gas supplier visually inspect the burner flames for the desired flame appearance at the beginning of the heating season and approximately midway in heating season.

The manufacturer also recommends that a qualified installer, service agency or the gas supplier clean the flame sensor with steel wool at the beginning of the heating season.

Lubrication

The blower motor and induced draft blower motor are prelubricated by the manufacturer and do not require further attention.

A qualified installer, service agency or the gas supplier must periodically clean the motors to prevent the possibility of overheating due to an accumulation of dust and dirt on the windings or on the motor exterior. And, as suggested elsewhere in these instructions, the air filters should be kept clean because dirty filters can restrict air flow and the motor depends upon sufficient air flowing across and through it to prevent overheating.

Cooling Section

⚠ DANGER

Power supply to unit must be disconnected before making field connections. To avoid electrical shock, personal injury or death, be sure to rigorously adhere to field wiring procedures regarding proper lockout and tagout of components.

It is recommended that at the beginning of each cooling season a qualified installer or service agency inspect and clean the cooling section of this unit. The following areas should be addressed: evaporator coil. condenser coil, condenser fan motor and venturi area.

To Inspect the Evaporator Coil

⚠ DANGER

Label all wires prior to disconnection when servicing the unit. Wiring errors can cause improper and dangerous operation resulting in fire, electrical shock, property damage, severe personal injury or death.

1. Remove the filter access panel and the blower/ evaporator coil access panel. Remove the filters.
2. Shine a flashlight on the evaporator coil (both sides) and inspect for accumulation of lint, insulation, etc.
3. If coil requires cleaning, follow the steps shown below.

Cleaning Evaporator Coil

1. The coil should be cleaned when it is dry. If the coil is coated with dirt or lint, vacuum it with a soft brush attachment. Be careful not to bend the coil fins.
2. If the coil is coated with oil or grease, clean it with a mild detergent-and-water solution. Rinse the coil thoroughly with water. **Important: Do not** use excessive water pressure. Excessive water pressure can bend the fins and tubing of the coil and lead to inadequate unit performance. Be careful not to splash water excessively into unit.
3. Inspect the drain pan and condensate drain at the same time the evaporator coil is checked. Clean the drain pan by flushing with water and removing any matters of obstructions which may be present.
4. Go to next section for cleaning the condenser coil.

Cleaning Condenser Coil, Condenser Fan, Circulation Air Blower and Venturi

1. Remove the compressor access panel. Disconnect the wires to the condenser fan motor in the control box (see wiring diagram). Remove the wires from the opening in the bottom of the control box.
2. Remove the screws securing the condenser top panel and remove the panel with condenser fan motor and grille attached.
3. The coil should be cleaned when it is dry. If the coil is coated with dirt or lint, vacuum it with a soft brush attachment. Be careful not to bend the coil fins.
4. If the coil is coated with oil or grease, clean it with a mild detergent-and-water solution. Rinse the coil thoroughly with water. **Important: Do not** use excessive water pressure. Excessive water pressure can bend the fins and tubing of the coil and lead to inadequate unit performance. Be careful not to splash water excessively into unit.
5. The venturi should also be inspected for items of obstruction such as collections of grass, dirt or spider webs. Remove any that are present.
6. Inspect the circulating air blower wheel and motor for accumulation of lint, dirt or other obstruction and clean it as necessary. Inspect the blower motor mounts and the blower housing for loose mounts or other damage. Repair or replace if necessary.

Re-Assembly

1. Place the condenser top panel back on the unit and replace all screws.
2. Run the fan motor wires through the hole in the bottom of the control box. Reconnect fan motor wires per the wiring diagram attached to the back of the cover.
3. Replace the filter and blower/evaporator coil access panels.
4. Replace the control box cover and controls access panel.
5. Restore electrical power to the unit and check for proper operation, especially the condenser fan motor.

System Charge Charts

Figure 41: System Charging Chart: MPS A03C Cooling

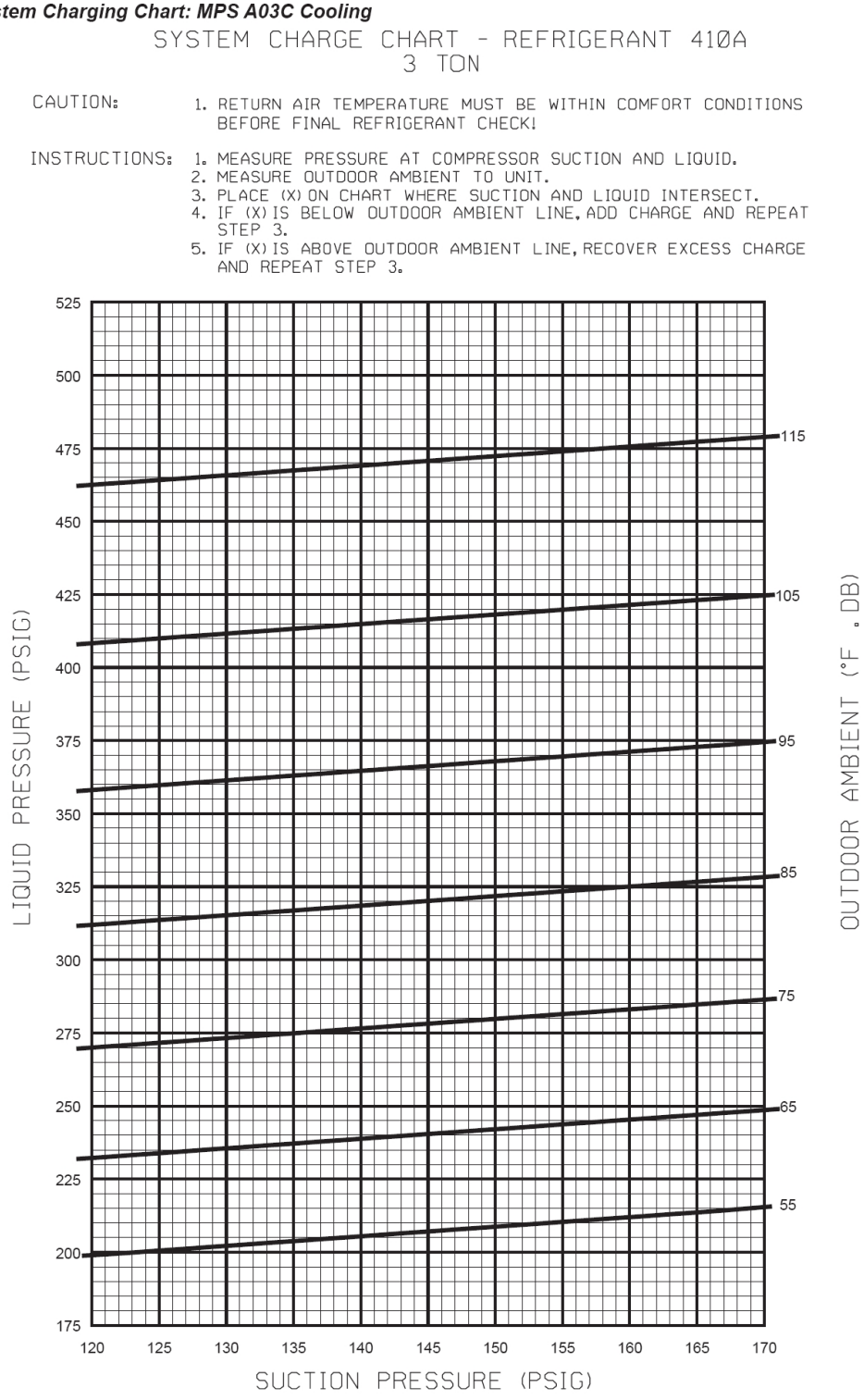


Figure 42: System Charge Chart: MPS A04C Cooling

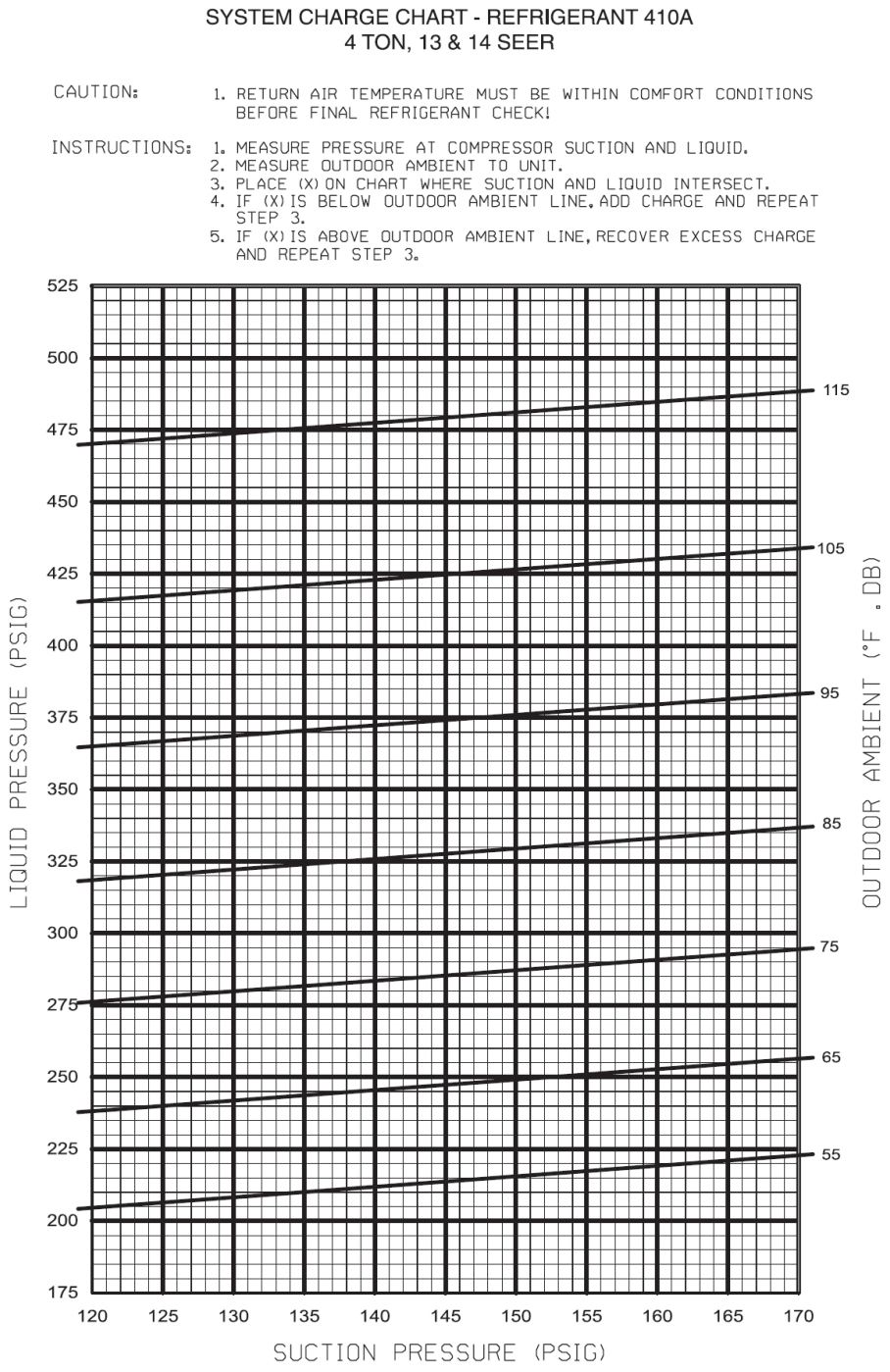
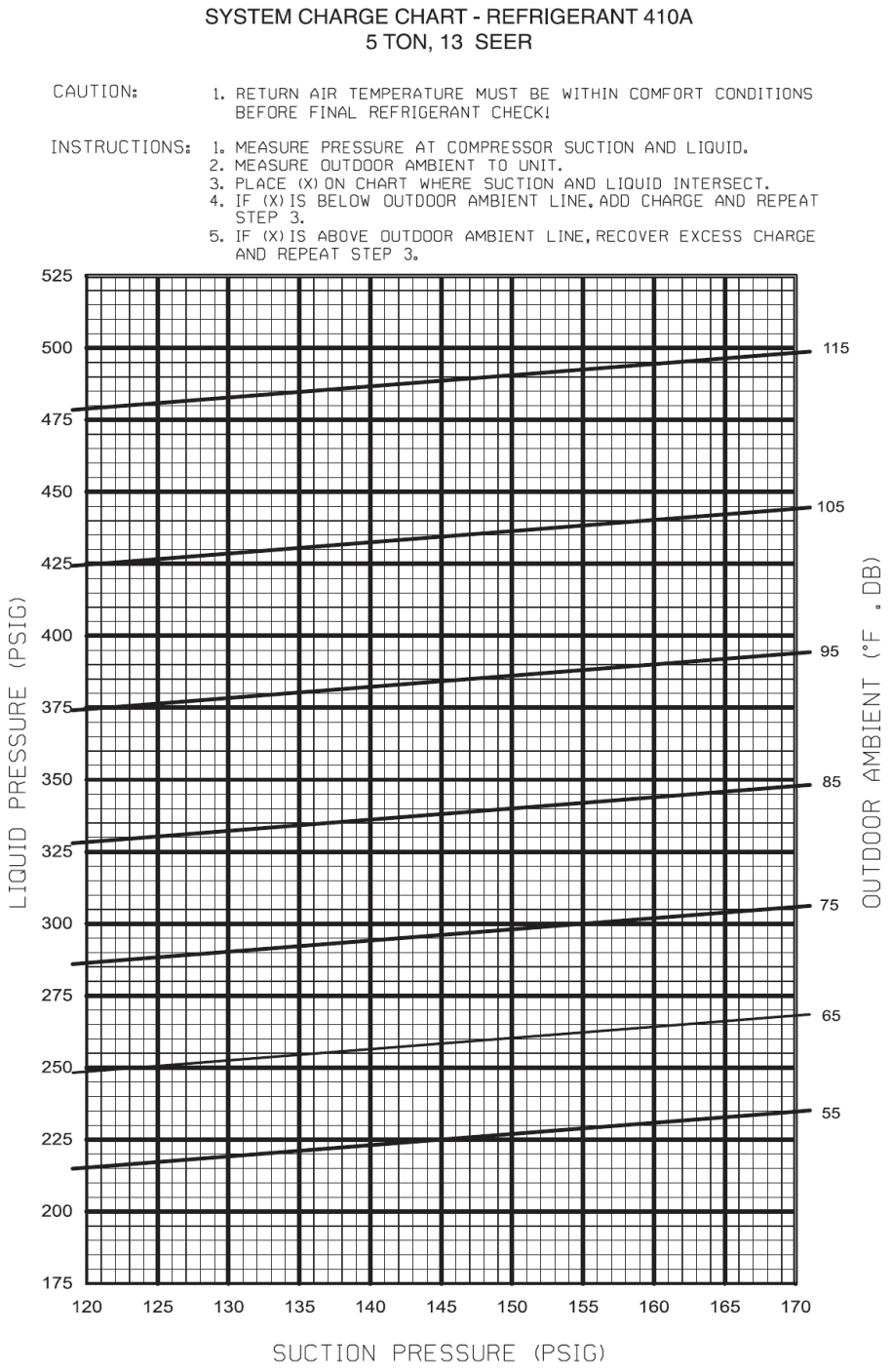


Figure 43: System Charge Chart: MPS A05C Cooling



Blower Motor Speed Taps

After determining necessary CFM and speed tap data from the Airflow Performance Data, follow the steps below to change speeds (see Figure 46 on page 54 for examples).

1. Remove the blower access panel.
2. Reference Figure 44 for location of the speed tap block on the blower.
3. Remove the furnace control access panel.
4. Remove the control box cover. See Figure 45 for location of the integrated furnace control board.
5. Reference Figure 44 and Figure 46 for the proper location of the red and black wires on the speed tap block and on the furnace integrated control board to obtain the speed tap you have chosen.
6. After adjusting the wires accordingly, attach the control box cover, furnace control access panel and the blower access panel to the unit.

Figure 44: Speed Tap Block

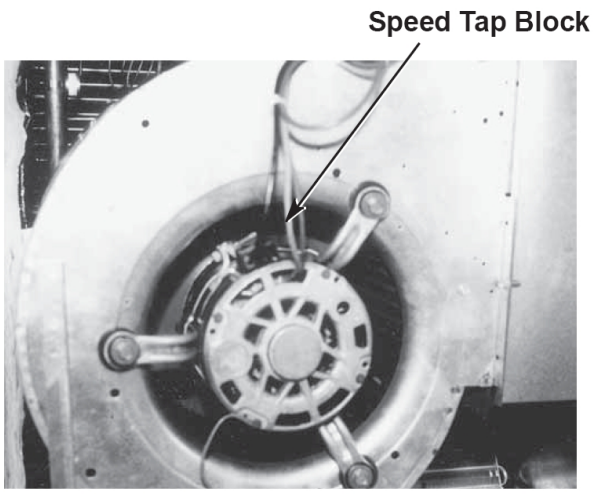


Figure 45: Integrated Furnace Control

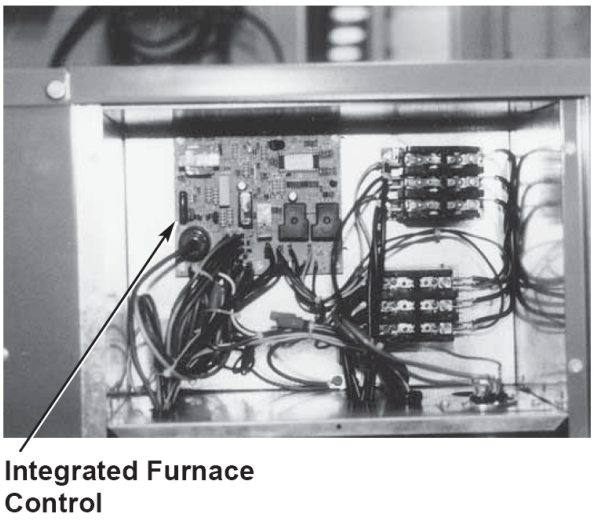
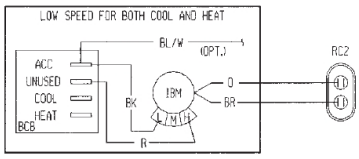
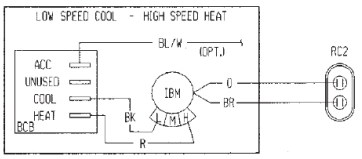


Figure 46: Speed Tap Examples

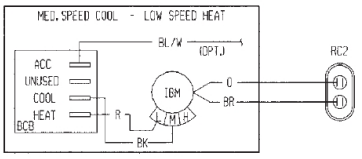
EXAMPLE 1



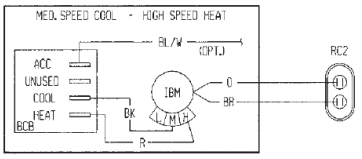
EXAMPLE 2



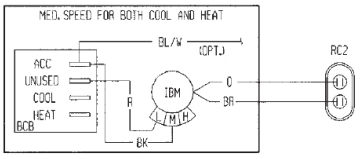
EXAMPLE 3



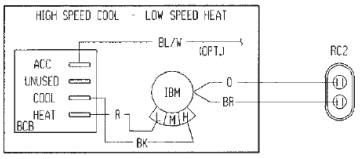
EXAMPLE 4



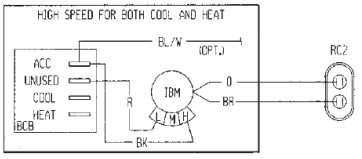
EXAMPLE 5



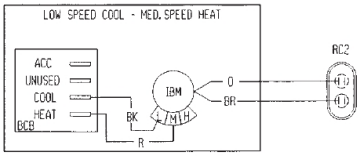
EXAMPLE 6



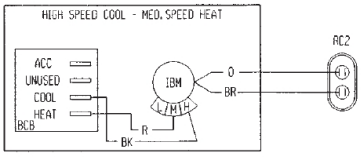
EXAMPLE 7



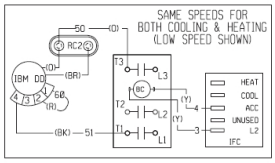
EXAMPLE 8



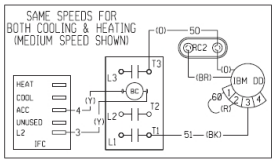
EXAMPLE 9



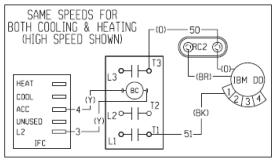
EXAMPLE 10



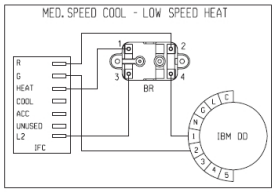
EXAMPLE 11



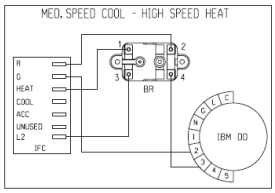
EXAMPLE 12



EXAMPLE 13



EXAMPLE 14



⚠ DANGER

Disconnect all power to unit before servicing. Contactor may break only one side. Failure to shut off power can cause electrical shock resulting in personal injury or death.

Table 28: Cooling Troubleshooting Chart

Symptom	Possible Cause	Remedy
Unit will not run	Power OFF or loose electrical connection	Check for correct voltage at compressor contactor in control box
	Thermostat out of calibration-set too high	Reset
	Failed contactor	Check for 24 volts at contactor coil replace if contacts are open
	Blown fuses/Transformer defective	Replace fuses.
	High pressure control open (if provided)	Check wiring-replace transformer – Reset-also see high head pressure remedy-The high pressure control opens at 450 PSIG
	Interconnecting low voltage wiring damaged	Replace thermostat wiring
Condenser fan runs, compressor doesn't	Loose connection	Check for correct voltage at compressor check & tighten all connections
	Compressor stuck, grounded or open motor winding, open internal overload.	Wait at least 2 hours for overload to reset. If still open, replace the compressor.
	Low voltage condition	At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating
	Low voltage condition	Add start kit components
Insufficient cooling	Improperly sized unit	Recalculate load
	Improper airflow	Check should be approximately 400 CFM per ton.
	Incorrect refrigerant charge	Charge per procedure attached to unit service panel
	Air, non-condensable or moisture in system	Recover refrigerant, evacuate & recharge, add filter drier
	Incorrect voltage	At compressor terminals, voltage must be within 10% of rating plate volts when unit is operating.
Compressor short cycles	Incorrect voltage	At compressor terminals, voltage must be ±10% of nameplate marking when unit is operating.
	Defective overload protector	Replace check for correct voltage
	Refrigerant undercharge	Add refrigerant
Registers sweat	Low evaporator airflow	Increase speed of blower or reduce restriction replace air filter
High head-low vapor pressures	Restriction in liquid line, expansion device or filter drier	Remove or replace defective component
	Flow check piston size too small	Change to correct size piston
	Incorrect capillary tubes	Change coil assembly
High head-high or normal vapor pressure Cooling mode	Dirty condenser coil	Clean coil
	Refrigerant overcharge	Correct system charge
	Condenser fan not running	Repair or replace
	Air or non-condensable in system	Recover refrigerant, evacuate & recharge
Low vapor - cool compressor iced evaporator coil	Defective compressor valves	Replace compressor
	Incorrect capillary tubes	Replace coil assembly
Low vapor cool evaporator coil	Low evaporator airflow	Increase speed of blower or reduce restriction replace air filter
	Operating below 65°F outdoors	Add low ambient kit
	Moisture in system	Recover refrigerant evacuate & recharge add filter drier
High vapor pressure	Excessive load	Recheck load calculation
	Defective compressor Replace	
Fluctuating head & vapor	Air or non-condensate in system	Recover refrigerant, evacuate & recharge
Gurgle or pulsing noise at expansion device or liquid line	Air or non-condensable in system	Recover refrigerant, evacuate & recharge

Furnace Troubleshooting Guide

Figure 47: Furnace Troubleshooting Guide (Combination Heating and Cooling Units with Direct Spark Ignition)

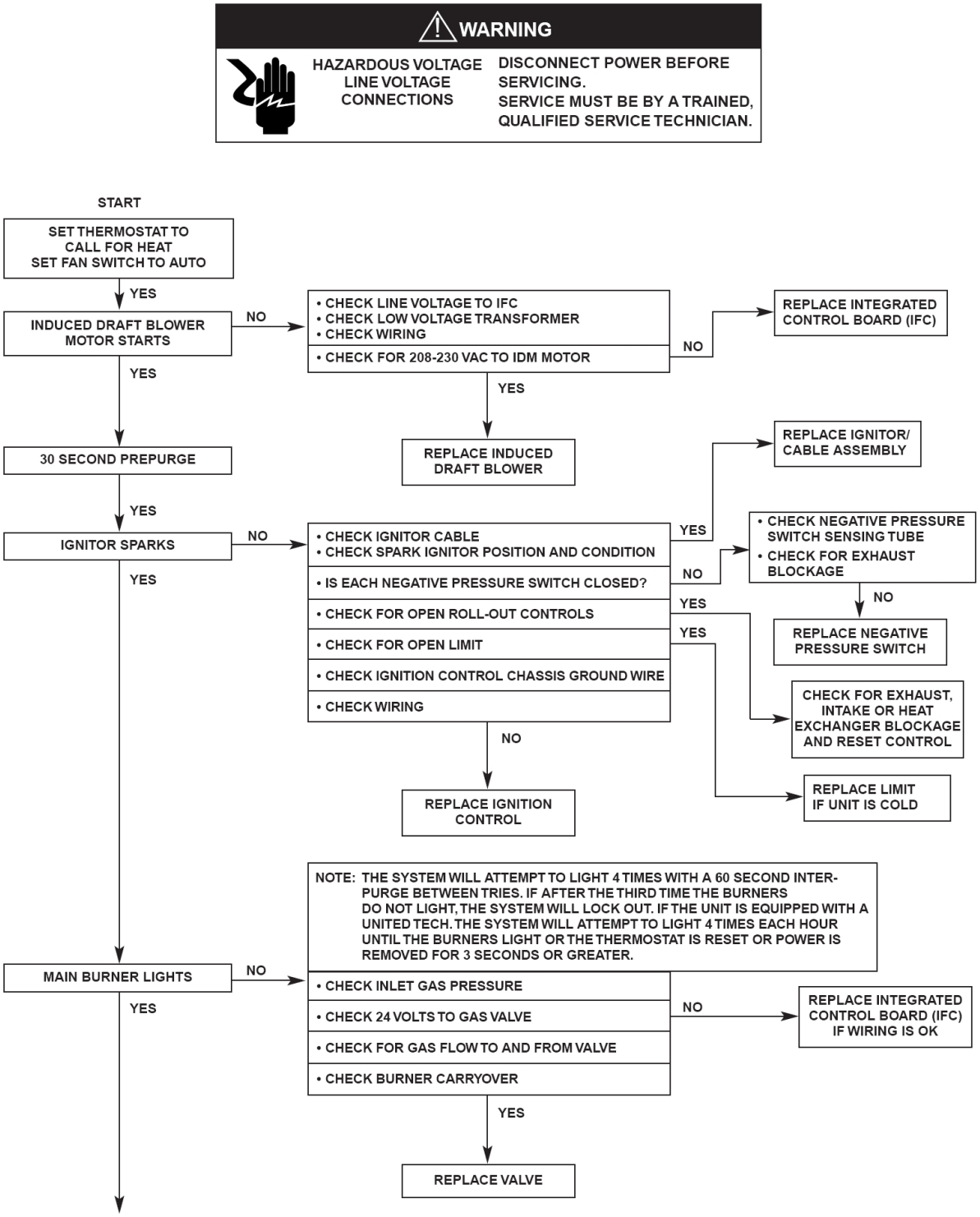
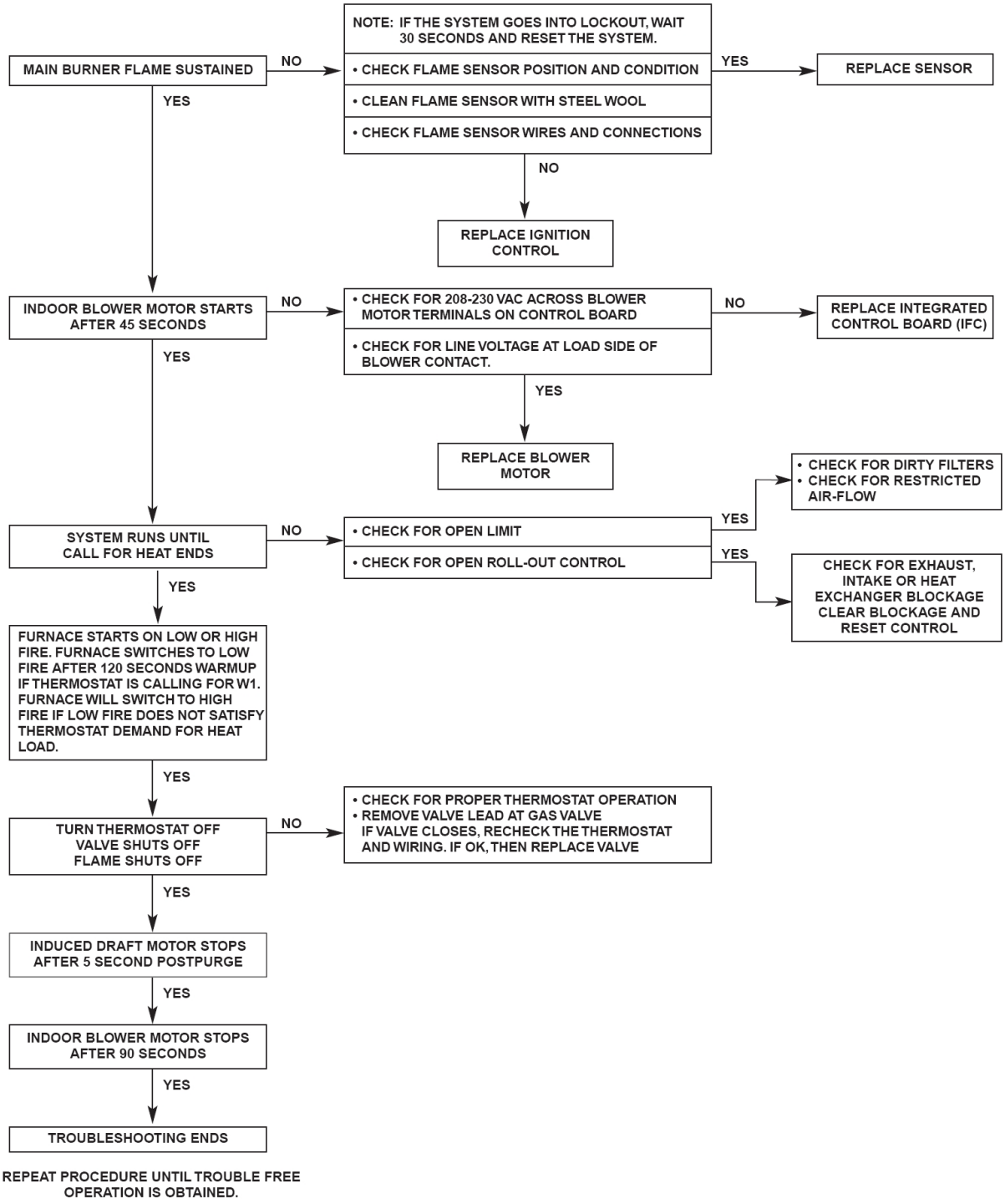


Figure 47 continued: Furnace Troubleshooting Guide



Replacement Parts

To find your local Daikin Applied Certified Parts Distributor, go to www.DaikinApplied.com and select Parts Locator.

Daikin Applied Training and Development

Now that you have made an investment in modern, efficient Daikin equipment, its care should be a high priority. For training information on all Daikin HVAC products, please visit us at www.DaikinApplied.com and click on Training, or call 540-248-9646 and ask for the Training Department.

Warranty

All Daikin equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local Daikin Applied representative for warranty details. To find your local Daikin Applied representative, go to www.DaikinApplied.com.

Aftermarket Services

To find your local parts office, visit www.DaikinApplied.com or call 800-37PARTS (800-377-2787). To find your local service office, visit www.DaikinApplied.com or call 800-432-1342.

This document contains the most current product information as of this printing. For the most up-to-date product information, please go to www.DaikinApplied.com.

Products manufactured in an ISO Certified Facility.

Generated on: This page was generated by TSDR on 2023-07-31 12:34:23 EDT

Mark: GLOBAL AIR

US Serial Number: 86433666

Application Filing Date: Oct. 24, 2014

US Registration Number: 4798403

Registration Date: Aug. 25, 2015

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: A Section 8 declaration has been accepted.

Status Date: Jan. 25, 2021

Publication Date: Jun. 09, 2015

Mark Information

Mark Literal Elements: GLOBAL AIR

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the lettering "GLOBAL Air". The letter "O" is circular. The wave pattern is in the middle of letter "O". The tail of lowercase letter "i" is connected to the Lowercase letter "r".

Color(s) Claimed: Color is not claimed as a feature of the mark.

Disclaimer: "AIR"

Design Search Code(s): 26.17.02 - Wavy line(s), band(s) or bar(s); Lines, wavy; Bars, wavy; Bands, wavy
26.17.05 - Lines, horizontal; Horizontal line(s), band(s) or bar(s); Bars, horizontal; Bands, horizontal

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air conditioning apparatus; Air conditioning installations; Air cooling apparatus; Air filtering installations; Components for air conditioning and cooling systems, namely, evaporative air coolers; Dryers for the removal of water vapor from compressed air and gases; Electric fans for personal use; Electric floor heating systems, namely, cables, electric mats and sensors for floor heating systems sold as a unit; Fans for air conditioning apparatus; Filters for air conditioning; Hot air blowers; Air purifying apparatus

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Feb. 05, 2014

Use in Commerce: Aug. 20, 2014

Basis Information (Case Level)

Filed Use:	Yes	**Currently Use:**	Yes
Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: LU, ZHIWEI

Owner Address: NO. 19 QINLONG TONJIA
GONGYENYUAN, TIANNING, CHANGZHOU
JIANGSU CHINA 213000

Legal Entity Type: INDIVIDUAL **Citizenship:** CHINA

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Li Weng

Attorney Primary Email Address: alice_h_aci@foxmail.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: Li Weng
Rockville law group LLC
245 EAST MAIN STREET, SUITE 107
ALHAMBRA, CALIFORNIA UNITED STATES 91801

Correspondent e-mail: alice_h_aci@foxmail.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jan. 25, 2021	NOTICE OF ACCEPTANCE OF SEC. 8 - E-MAILED	
Jan. 25, 2021	REGISTERED - SEC. 8 (6-YR) ACCEPTED	70629
Jan. 25, 2021	CASE ASSIGNED TO POST REGISTRATION PARALEGAL	70629
Dec. 11, 2020	TEAS SECTION 8 RECEIVED	
Nov. 14, 2016	WITHDRAWAL OF ATTORNEY GRANTED	
Nov. 14, 2016	TEAS WITHDRAWAL OF ATTORNEY RECEIVED	
Nov. 09, 2016	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
Aug. 25, 2015	REGISTERED-PRINCIPAL REGISTER	
Jun. 09, 2015	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Jun. 09, 2015	PUBLISHED FOR OPPOSITION	
May 20, 2015	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
May 05, 2015	LAW OFFICE PUBLICATION REVIEW COMPLETED	68552
Apr. 30, 2015	APPROVED FOR PUB - PRINCIPAL REGISTER	
Apr. 29, 2015	TEAS/EMAIL CORRESPONDENCE ENTERED	68552
Apr. 29, 2015	CORRESPONDENCE RECEIVED IN LAW OFFICE	68552
Apr. 27, 2015	ASSIGNED TO LIE	68552
Apr. 23, 2015	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Feb. 13, 2015	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Feb. 13, 2015	NON-FINAL ACTION E-MAILED	6325
Feb. 13, 2015	NON-FINAL ACTION WRITTEN	88577
Feb. 12, 2015	ASSIGNED TO EXAMINER	88577
Nov. 01, 2014	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Oct. 31, 2014	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Oct. 28, 2014	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: TMEG LAW OFFICE 105 **Date in Location:** Jan. 25, 2021

Assignment Abstract Of Title Information

Summary

Total Assignments: 1 **Registrant:** HAIFENG GU

Assignment 1 of 1

Conveyance: ASSIGNS THE ENTIRE INTEREST

Reel/Frame: 5905/0096 **Pages:** 4

Date Recorded: Oct. 20, 2016

Supporting Documents: assignment-tm-5905-0096.pdf

Assignor

Name: GU, HAIFENG **Execution Date:** Oct. 15, 2016

Legal Entity Type: INDIVIDUAL **Citizenship:** UNITED STATES

Assignee

Name: LU, ZHIWEI

Legal Entity Type: INDIVIDUAL **Citizenship:** CHINA

Address: NO. 19 QINLONG TONJIA
GONGYENYUAN, TIANNING, CHANGZHOU
JIANGSU, CHINA 213000

Correspondent

Correspondent Name: HAIFENG GU

Correspondent Address: 1721 S. VINEYARD AVE UNIT J
ONTARIO, CA 91761

Domestic Representative

Domestic Representative Name: AMERICAN CERTIFICATION INSTITUTE

Domestic Representative Address: 245 EAST MAIN STREET
SUITE 115
ALHAMBRA, CA 91803


GLOBAL Air
GLOBAL Air
GLOBAL Air

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Mark: SOLAR CHILL

SOLAR CHILL

US Serial Number: 87466156

Application Filing Date: May 26, 2017

US Registration Number: 5369137

Registration Date: Jan. 02, 2018

Filed as TEAS RF: Yes

Currently TEAS RF: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Jan. 02, 2018

Publication Date: Oct. 17, 2017

Mark Information

Mark Literal Elements: SOLAR CHILL

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Cooling evaporators; Evaporative air coolers; Evaporative air cooling units for domestic use; Industrial cooling apparatus, namely, compax coolers; Walk-in coolers; Water coolers; Wine coolers, namely, refrigerated cabinets containing racks for wine bottles and storage shelves; Components for air conditioning and cooling systems, namely, evaporative air coolers; Electric fans with evaporative cooling devices; Portable evaporative air coolers

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Jan. 01, 1995

Use in Commerce: Jan. 01, 1995

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU: No

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E: No

Currently 66A: No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Southwest Solar, Inc.

Owner Address: 5085 S. Melpomene Way
Tucson, ARIZONA UNITED STATES 85747

Legal Entity Type: CORPORATION **State or Country Where Organized:** ARIZONA

Attorney/Correspondence Information

Attorney of Record - None

Correspondent

Correspondent Name/Address: CUNNINGHAM, WILLIAM ARTHUR
5085 S. MELPOMENE WAY
TUCSON, ARIZONA UNITED STATES 85747

Phone: 5208857925

Correspondent e-mail: cuningham@dakotacom.net **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jan. 02, 2023	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Jan. 02, 2018	REGISTERED-PRINCIPAL REGISTER	
Oct. 17, 2017	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Oct. 17, 2017	PUBLISHED FOR OPPOSITION	
Sep. 27, 2017	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Sep. 14, 2017	LAW OFFICE PUBLICATION REVIEW COMPLETED	70138
Sep. 11, 2017	ASSIGNED TO LIE	70138
Aug. 25, 2017	APPROVED FOR PUB - PRINCIPAL REGISTER	
Aug. 25, 2017	EXAMINER'S AMENDMENT ENTERED	88888
Aug. 25, 2017	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Aug. 25, 2017	EXAMINERS AMENDMENT E-MAILED	6328
Aug. 25, 2017	EXAMINERS AMENDMENT -WRITTEN	73703
Aug. 25, 2017	ASSIGNED TO EXAMINER	73703
Jun. 02, 2017	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
May 30, 2017	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION **Date in Location:** Jan. 02, 2018


SOLAR CHILL 1412XP
VOLTS: 8 to 14.5, AMPS: 5
SOUTHWEST-SOLAR.COM
TUCSON, AZ 520 885 7925

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Mark: QUILO

QUILO

US Serial Number: 87977436

Application Filing Date: May 17, 2017

US Registration Number: 5494013

Registration Date: Jun. 12, 2018

Filed as TEAS RF: Yes

Currently TEAS RF: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Jun. 12, 2018

Publication Date: Nov. 14, 2017 **Notice of Allowance Date:** Jan. 09, 2018

Mark Information

Mark Literal Elements: QUILO

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Translation: The English translation of the word "QUILO" in the mark is "kilo" or "kilogram".

Related Properties Information

International Registration Number: 1384681

International Application(s) /Registration(s) Based on this Property: A0070906/1384681

Child Of: 87453476

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Dehumidifiers; air cooling apparatus; air-conditioning, air cooling and ventilation apparatus and instruments; evaporative air cooling units for domestic and commercial use; components for air conditioning and cooling systems, namely, evaporative air coolers; air conditioners; air conditioning apparatus; air purifiers; air purification units; air deodorizers; humidifiers; portable evaporative air coolers; electric fans; portable electric fans; electric floor fans; electric fans for household purposes

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: May 2017 **Use in Commerce:** Aug. 2017

Basis Information (Case Level)

Filed Use:	No	**Currently Use:**	Yes
Filed ITU:	Yes	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: JMATEK Limited

Owner Address: Financial Centre, 223-231 Wai Yip St.
Unit 807, 8/F., Tower B, Manulife
Kwun Tong, Kowloon HONG KONG

Legal Entity Type: limited company (ltd.) **State or Country Where Organized:** HONG KONG

Owner Name: JMA NORTH AMERICA, LLC

DBA, AKA, Formerly: DBA JMATEK North America

Owner Address: 1235 Old Alpharetta Rd., Suite 170
Alpharetta, GEORGIA UNITED STATES 30005

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** DELAWARE

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Pina Campagna **Docket Number:** 2484-3 DIV

Attorney Primary Email Address: docket@carterdeluca.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: Pina Campagna
Carter, DeLuca and Farrell LLP
576 Broad Hollow Rd.
MELVILLE, NEW YORK UNITED STATES 11747

Phone: 6315015700 **Fax:** 6315013526

Correspondent e-mail: docket@carterdeluca.com efuller@carterdeluca.com pcampagna@carterdeluca.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jun. 29, 2023	TEAS SECTION 8 & 15 RECEIVED	
Jun. 12, 2023	COURTESY REMINDER - SEC. 8 (6-YR) E-MAILED	
Jun. 12, 2018	REGISTERED-PRINCIPAL REGISTER	
May 05, 2018	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
May 04, 2018	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Apr. 24, 2018	STATEMENT OF USE PROCESSING COMPLETE	66154
Mar. 20, 2018	USE AMENDMENT FILED	66154
Apr. 24, 2018	DIVISIONAL PROCESSING COMPLETE	
Mar. 20, 2018	DIVISIONAL REQUEST RECEIVED	

Mar. 26, 2018	CASE ASSIGNED TO INTENT TO USE PARALEGAL	66154
Mar. 20, 2018	TEAS REQUEST TO DIVIDE RECEIVED	
Mar. 20, 2018	TEAS STATEMENT OF USE RECEIVED	
Jan. 09, 2018	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
Nov. 14, 2017	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Nov. 14, 2017	PUBLISHED FOR OPPOSITION	
Oct. 25, 2017	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Oct. 05, 2017	ASSIGNED TO LIE	76568
Sep. 21, 2017	APPROVED FOR PUB - PRINCIPAL REGISTER	
Aug. 31, 2017	EXAMINER'S AMENDMENT ENTERED	88888
Aug. 31, 2017	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Aug. 31, 2017	EXAMINERS AMENDMENT E-MAILED	6328
Aug. 31, 2017	EXAMINERS AMENDMENT -WRITTEN	78428
Aug. 21, 2017	EXAMINER'S AMENDMENT ENTERED	88888
Aug. 21, 2017	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Aug. 21, 2017	EXAMINERS AMENDMENT E-MAILED	6328
Aug. 21, 2017	EXAMINERS AMENDMENT -WRITTEN	78428
Aug. 16, 2017	ASSIGNED TO EXAMINER	78428
May 23, 2017	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
May 20, 2017	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION **Date in Location:** May 04, 2018

Roll over image to zoom in

Quilo

Quilo QE1SKS 3in1 Quiet Low Energy Portable Tower Fan with Evaporative Cooler & Humidifier in Black/Silver

4.0 out of 5 stars | 8 customer reviews | 6 answered questions

Price: $159.00 & FREE Shipping

In Stock.

Get it as soon as March 26 - 29 when you choose **Standard Shipping** at checkout.
Ships from and sold by My Home Climate.

- All-in-one Unit functions as a fan, evaporative air cooler, and humidifier for indoor use in open environments with adequate cross ventilation up to 130 sq. Ft
- Best used when the air is hot with low humidity, such as Desert areas like the Southwestern United States
- Recommended humidity level is 60 percent or less for maximum efficiency
- 3 speeds plus auto (low, medium and high) with 7.5-Hour off timer
- Detachable water tank with "low water" alarm (1.85 gallons / 7 liters tank capacity)

Compare with similar items

New (1) from $159.00 & FREE shipping.

Quilo

Quilo QP112WK Portable Air Conditioner with Dehumidifier & Fan for Rooms Up To 550 Sq. Ft. with Remote Control in White/Black

4.3 out of 5 stars | 16 customer reviews | 15 answered questions

Price: $399.00 & **FREE Shipping**

In Stock.

Get it as soon as March 26 - 29 when you choose **Standard Shipping** at checkout.
Ships from and sold by My Home Climate.

Size: **12,000 BTU**

10,000 BTU	12,000 BTU	14,000 BTU
$339.00	$399.00	$449.00

Color: **White/Black**

- Powerful air flow and quiet operation - Cools rooms up to 550 sq. ft. (Temperature range 61F to 89F)
- 12000 BTU (ASHRAE-128 Standard) / 6500 BTU (DOE+ 2017 Standard)
- Auto Evaporation – no bucket to empty (except in areas with high humidity), Long-Lasting, Washable Dust Filter, Quick & Easy installation (Exhaust hose length: 10.6" to 59", Window Bracket Width: Min. 26.6" or 33.1" to 49.6")
- Built-in Dehumidifier removes up to 80 pints/ 24 hours with continuous drain option for long unattended operation
- 3 speeds, Sleep mode, digital controls, 24 hour energy saving timer & remote control included

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Mark: RS

US Serial Number: 88149860

Application Filing Date: Oct. 10, 2018

US Registration Number: 5757212

Registration Date: May 21, 2019

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: May 21, 2019

Publication Date: Mar. 05, 2019

Mark Information

Mark Literal Elements: RS

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the letters "RS" on a dark circular ringed background.

Color(s) Claimed: Color is not claimed as a feature of the mark.

Design Search Code(s): 26.01.21 - Circles that are totally or partially shaded.

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Components for air conditioning and cooling systems, namely, evaporative air coolers

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Aug. 01, 1996

Use in Commerce: Aug. 01, 1996

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: L.B. WHITE COMPANY, LLC

Owner Address: 411 MASON STREET
ONALASKA, WISCONSIN UNITED STATES 54650

Legal Entity Type: LIMITED LIABILITY COMPANY

State or Country Where Organized: DELAWARE

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Charles S. Sara

Docket Number: 88997.034

Attorney Primary Email Address: csstm@dewittross.com

Attorney Email Authorized: Yes

Correspondent

Correspondent Name/Address: CHARLES S. SARA
DEWITT ROSS & STEVENS SC
2 EAST MIFFLIN
SUITE 600
MADISON, WISCONSIN UNITED STATES 53703

Phone: 608-395-6784

Correspondent e-mail: csstm@dewittross.com

Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Apr. 12, 2023	AUTOMATIC UPDATE OF ASSIGNMENT OF OWNERSHIP	
May 21, 2019	REGISTERED-PRINCIPAL REGISTER	
Mar. 05, 2019	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Mar. 05, 2019	PUBLISHED FOR OPPOSITION	
Feb. 13, 2019	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Jan. 22, 2019	APPROVED FOR PUB - PRINCIPAL REGISTER	
Jan. 22, 2019	ASSIGNED TO EXAMINER	81878
Oct. 23, 2018	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Oct. 20, 2018	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Oct. 13, 2018	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION

Date in Location: May 21, 2019

Assignment Abstract Of Title Information

Summary

Total Assignments: 2

Registrant: L.B. White Company, Inc.

Assignment 1 of 2

Conveyance: ENTITY CONVERSION

Reel/Frame: 8024/0306 **Pages:** 6

Date Recorded: Mar. 29, 2023

Supporting Documents: assignment-tm-8024-0306.pdf

Assignor

Name: L.B. WHITE COMPANY, INC. **Execution Date:** Sep. 06, 2017

Legal Entity Type: CORPORATION **State or Country Where Organized:** DELAWARE

Assignee

Name: L.B. WHITE COMPANY, LLC

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** DELAWARE

Address: 411 MASON STREET
ONALASKA, WISCONSIN 54650

Correspondent

Correspondent Name: NICOLE J. RENOUARD, QUARLES & BRADY LLP

Correspondent Address: 411 EAST WISCONSIN AVENUE, SUITE 2400
MILWAUKEE, WI 53202-4428

Domestic Representative - Not Found

Assignment 2 of 2

Conveyance: SECURITY INTEREST

Reel/Frame: 7273/0061 **Pages:** 4

Date Recorded: Apr. 28, 2021

Supporting Documents: assignment-tm-7273-0061.pdf

Assignor

Name: L.B. WHITE COMPANY, LLC **Execution Date:** Apr. 23, 2021

Legal Entity Type: LIMITED LIABILITY COMPANY **State or Country Where Organized:** DELAWARE

Assignee

Name: JOHNSON BANK

Legal Entity Type: STATE BANK **State or Country Where Organized:** WISCONSIN

Address: 100 EAST WISCONSIN AVENUE, SUITE 2400
MILWAUKEE, WISCONSIN 53202

Correspondent

Correspondent Name: DANIEL E. KATTMAN

Correspondent Address: 1000 N. WATER STREET
SUITE 1700
MILWAUKEE, WI 53202

Domestic Representative - Not Found


L.B.WHITE
800-345-7200
888-854-5221
www.lbwhite.com
www.reevessupply.com
4.5 x 10 in Heavy Duty Filter Housing
1 in NPT | Black / Clear | 635-131692


RS
REEVES
SUPPLY
(770) 854-5221 | reevessupply.com
AN L.B.WHITE BRAND

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Mark: H

US Serial Number: 88221030

Application Filing Date: Dec. 07, 2018

US Registration Number: 5787844

Registration Date: Jun. 25, 2019

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Jun. 25, 2019

Publication Date: Apr. 09, 2019

Mark Information

Mark Literal Elements: H

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the letter "H" formed by a coiled blue ribbon with trimmed ends that resemble straight-back blades with the backside of the ribbon outline in blue. The white background represents transparent area and is not part of the mark.

Color Drawing: Yes

Color(s) Claimed: The color(s) blue is/are claimed as a feature of the mark.

Design Search Code(s): 09.01.04 - Bows, decorative; Ribbons, giftwrap (gift wrap); Ribbons, hair
27.01.04 - Numbers forming objects; Objects composed of letters or numerals; Letters forming objects; Punctuation forming objects

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Cooling evaporators; Cooling units for industrial purposes; Evaporative air coolers; HVAC units; Air cooling apparatus; Air-conditioning, air cooling and ventilation apparatus and instruments; Components for air conditioning and cooling systems, namely, evaporative air coolers; Electric fans with evaporative cooling devices; Evaporative air cooling units for domestic use; Fans for HVAC units; Portable evaporative air coolers; Ventilating fans for commercial and industrial use; Ventilating, high-velocity fixed exhaust fans for commercial and agricultural use

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Sep. 01, 2015

Use in Commerce: Sep. 01, 2015

Basis Information (Case Level)

Filed Use:	Yes	**Currently Use:**	Yes
Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Hessaire Products, Inc.

Owner Address: 11550 US Hwy 278 E
Holly Pond, ALABAMA UNITED STATES 35083

Legal Entity Type:	CORPORATION	**State or Country Where Organized:**	ALABAMA

Attorney/Correspondence Information

Attorney of Record

Attorney Name:	Scott A. Hill	**Docket Number:**	H
Attorney Primary Email Address:	scott@thehilllawfirm.com	**Attorney Email Authorized:**	Yes

Correspondent

Correspondent Name/Address: SCOTT A. HILL
THE HILL LAW FIRM, PLC
2340 E LAUREL ST
MESA, ARIZONA UNITED STATES 85213

Phone:	602-361-6787	**Fax:**	602-995-0757
Correspondent e-mail:	scott@thehilllawfirm.com scotthillesq@msn.com	**Correspondent e-mail Authorized:**	Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jun. 25, 2019	REGISTERED-PRINCIPAL REGISTER	
Apr. 09, 2019	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Apr. 09, 2019	PUBLISHED FOR OPPOSITION	
Mar. 20, 2019	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Mar. 01, 2019	ASSIGNED TO LIE	66121
Feb. 11, 2019	APPROVED FOR PUB - PRINCIPAL REGISTER	
Feb. 11, 2019	EXAMINER'S AMENDMENT ENTERED	88888
Feb. 11, 2019	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Feb. 11, 2019	EXAMINERS AMENDMENT E-MAILED	6328
Feb. 11, 2019	EXAMINERS AMENDMENT -WRITTEN	92448
Feb. 07, 2019	ASSIGNED TO EXAMINER	92448
Jan. 01, 2019	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Dec. 30, 2018	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Dec. 11, 2018	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location:	PUBLICATION AND ISSUE SECTION	**Date in Location:**	Jun. 25, 2019


HESSAIRE™
COOLING SOLUTIONS
HOME
PATIO
GARAGE
WORK PLACE
RV
BOAT
MC61A
MC61M
MFC6000
Mobile Evaporative Cooler
COOL AIR


HESSAIRE

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Mark: AURORA AIR CONDITION

US Serial Number: 88744105

Application Filing Date: Jan. 01, 2020

US Registration Number: 6381383

Registration Date: Jun. 08, 2021

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Jun. 08, 2021

Publication Date: Nov. 10, 2020 **Notice of Allowance Date:** Jan. 05, 2021

Mark Information

Mark Literal Elements: AURORA AIR CONDITION

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the stylized wording "AURORA" in blue with the letter "O" comprised of a snowflake design. A wavy line appears above the wording from the letter "U" to the final letter "A". The stylized wording "AIR CONDITION" appears in gray below the bottom right of the wording "AURORA".

Color Drawing: Yes

Color(s) Claimed: The color(s) blue and gray is/are claimed as a feature of the mark.

Disclaimer: "AIR CONDITION"

Design Search Code(s):
01.15.09 - Snowflakes
26.17.02 - Wavy line(s), band(s) or bar(s); Lines, wavy; Bars, wavy; Bands, wavy
26.17.05 - Lines, horizontal; Horizontal line(s), band(s) or bar(s); Bands, horizontal; Bars, horizontal
26.17.09 - Lines, curved; Curved line(s), band(s) or bar(s); Bands, curved; Bars, curved
27.03.05 - Objects forming letters or numerals

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air-conditioning apparatus; Air-conditioning apparatus and installations; Air conditioning apparatus; Air conditioning apparatus and installations; Air conditioning units; Air filters for air conditioning units; Components for air conditioning and cooling systems, namely, evaporative air coolers; Filters for air conditioning; all of the foregoing not for commercial use

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Jul. 2020 **Use in Commerce:** Jul. 2020

Basis Information (Case Level)

Filed Use: No **Currently Use:** Yes

Filed ITU: Yes **Currently ITU:** No

Filed 44D: No **Currently 44E:** No

Filed 44E: No **Currently 66A:** No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Aurora Air-Condition Inc

Owner Address: 3250 Plymouth Rd #203
Ann Arbor, MICHIGAN UNITED STATES 48105

Legal Entity Type: CORPORATION **State or Country Where Organized:** MICHIGAN

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Francis John Ciaramella, Esquire

Attorney Primary Email Address: frank@fjcpllc.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: Francis John Ciaramella, Esquire
Francis John Ciaramella, PLLC
110 Front Street, Suite 300
Jupiter, FLORIDA UNITED STATES 33477

Phone: 5612957325

Correspondent e-mail: frank@fjcpllc.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jun. 08, 2021	REGISTERED-PRINCIPAL REGISTER	
May 04, 2021	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
May 01, 2021	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Mar. 31, 2021	STATEMENT OF USE PROCESSING COMPLETE	71034
Mar. 09, 2021	USE AMENDMENT FILED	71034
Mar. 29, 2021	CASE ASSIGNED TO INTENT TO USE PARALEGAL	71034
Mar. 09, 2021	TEAS STATEMENT OF USE RECEIVED	
Jan. 05, 2021	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
Nov. 10, 2020	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Nov. 10, 2020	PUBLISHED FOR OPPOSITION	
Oct. 21, 2020	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Oct. 07, 2020	APPROVED FOR PUB - PRINCIPAL REGISTER	
Oct. 06, 2020	EXAMINER'S AMENDMENT ENTERED	88888
Oct. 06, 2020	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Oct. 06, 2020	EXAMINERS AMENDMENT E-MAILED	6328
Oct. 06, 2020	EXAMINERS AMENDMENT -WRITTEN	94490
Sep. 10, 2020	TEAS/EMAIL CORRESPONDENCE ENTERED	88889
Sep. 09, 2020	CORRESPONDENCE RECEIVED IN LAW OFFICE	88889

Sep. 09, 2020	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Apr. 01, 2020	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Apr. 01, 2020	NON-FINAL ACTION E-MAILED	6325
Apr. 01, 2020	NON-FINAL ACTION WRITTEN	94490
Mar. 20, 2020	ASSIGNED TO EXAMINER	94490
Mar. 19, 2020	ASSIGNED TO EXAMINER	88572
Jan. 08, 2020	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Jan. 07, 2020	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Jan. 04, 2020	NEW APPLICATION ENTERED	

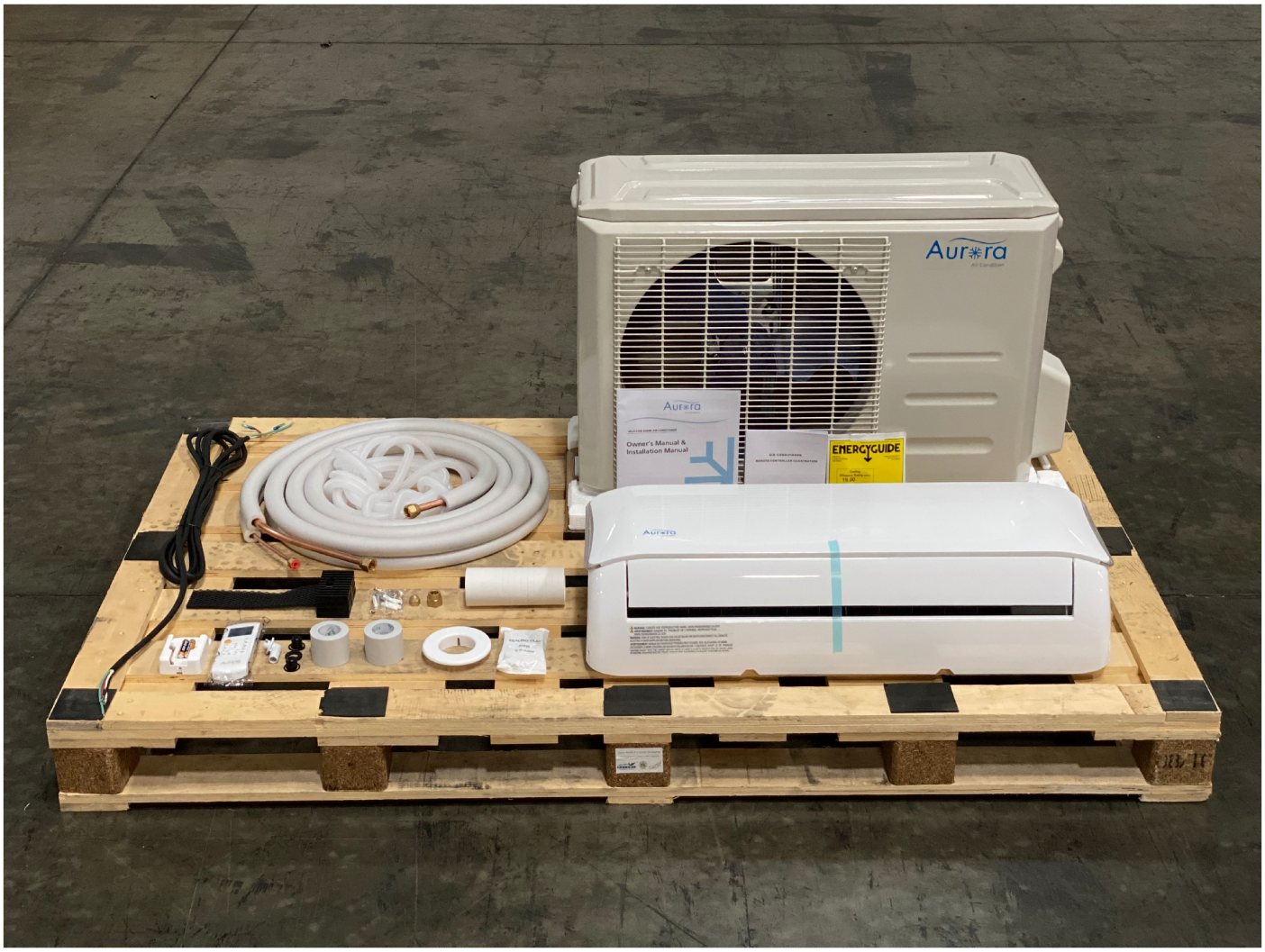
TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION **Date in Location:** May 01, 2021


Aurora


Aurora
Owner's Manual &
Installation Manual
ENERGYGUIDE


Aurora
Air Condition


Aurora
Air Condition
AIR-CONDITIONER
SPLIT TYPE (INDOOR UNIT)
AU-A12HR-1A-I
Cooling & heating
Net Weight: 8.6kg Gross Weight: 11.2kg
Power Supply:115V~ 60Hz, 1Ph


ON/OFF
SILENCE FP
MODE
TIMER ON
TEMP
FAN
TIMER OFF
SLEEP
SWING
DIRECT
TURBO
SELF CLEAN
LED
FOLLOW ME
Aurora
Air Condition

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Mark: BHI

US Serial Number: 90678630

Application Filing Date: Apr. 28, 2021

US Registration Number: 6776493

Registration Date: Jun. 28, 2022

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor: LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Jun. 28, 2022

Publication Date: Feb. 01, 2022 **Notice of Allowance Date:** Mar. 29, 2022

Mark Information

Mark Literal Elements: BHI

Standard Character Claim: No

Mark Drawing Type: 5 - AN ILLUSTRATION DRAWING WITH WORD(S) /LETTER(S)/ NUMBER(S) INSTYLIZED FORM

Description of Mark: The mark consists of stylized lettering "BHI" in blue.

Color Drawing: Yes

Color(s) Claimed: The color(s) blue is/are claimed as a feature of the mark.

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air-conditioning, air cooling and ventilation apparatus and instruments; Air conditioning apparatus; Air conditioning installations; Air conditioning installations for vehicles; Air conditioning units; Air filters for air conditioning units; Refrigerating appliances and installations; Refrigerator condensers; Refrigerators; Components for air conditioning and cooling systems, namely, evaporative air coolers; Fans for air conditioning apparatus; Portable refrigerators

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Apr. 28, 2021

Use in Commerce: Apr. 28, 2021

Basis Information (Case Level)

Filed Use:	No	**Currently Use:**	Yes
Filed ITU:	Yes	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Best Houseware Inc.

Owner Address: 17700 Castleton St, Suite 373
City of Industry, CALIFORNIA UNITED STATES 91748

Legal Entity Type: CORPORATION

State or Country Where Organized: CALIFORNIA

Attorney/Correspondence Information

Attorney of Record

Attorney Name: CHEYANG CHEN

Attorney Primary Email Address: chen.patentlaw@gmail.com

Attorney Email Authorized: Yes

Correspondent

Correspondent Name/Address: CHEYANG CHEN
LAW OFFICE OF MICHAEL CHEN
17700 CASTLETON ST, SUITE 373
CITY OF INDUSTRY, CALIFORNIA UNITED STATES 91748

Phone: 626-225-6295

Fax: 6266420808

Correspondent e-mail: chen.patentlaw@gmail.com mcheniplaw30@gmail.com

Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Jun. 28, 2022	NOTICE OF REGISTRATION CONFIRMATION EMAILED	
Jun. 28, 2022	REGISTERED-PRINCIPAL REGISTER	
May 21, 2022	NOTICE OF ACCEPTANCE OF STATEMENT OF USE E-MAILED	
May 20, 2022	ALLOWED PRINCIPAL REGISTER - SOU ACCEPTED	
Apr. 20, 2022	STATEMENT OF USE PROCESSING COMPLETE	74055
Apr. 05, 2022	USE AMENDMENT FILED	74055
Apr. 19, 2022	CASE ASSIGNED TO INTENT TO USE PARALEGAL	74055
Apr. 05, 2022	TEAS STATEMENT OF USE RECEIVED	
Mar. 29, 2022	NOA E-MAILED - SOU REQUIRED FROM APPLICANT	
Feb. 01, 2022	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Feb. 01, 2022	PUBLISHED FOR OPPOSITION	
Jan. 12, 2022	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Dec. 27, 2021	APPROVED FOR PUB - PRINCIPAL REGISTER	
Dec. 27, 2021	ASSIGNED TO EXAMINER	76581
Aug. 03, 2021	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
May 01, 2021	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION

Date in Location: May 20, 2022


BHI


BHI
12,000 BTU Ductless Mini Split
Room Air Conditioner - Outdoor Unit
(115-120V~60Hz)
BHI-12K115V-US
Fragile

BHI 12000 BTU MINI Split Ductless Air Conditioner 230V 16 Ft White

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Mark: CIRC-AIR

CIRC-AIR

US Serial Number: 90501963

Application Filing Date: Feb. 01, 2021

US Registration Number: 6601333

Registration Date: Dec. 28, 2021

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Dec. 28, 2021

Publication Date: Oct. 12, 2021

Mark Information

Mark Literal Elements: CIRC-AIR

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Air-conditioning apparatus; Air-conditioning apparatus and installations; Air-conditioning installations; Air-conditioning, air cooling and ventilation apparatus and instruments; Air conditioning apparatus; Air conditioning apparatus and installations; Air conditioning installations; Boilers for heating installations; Central heating radiators; Heat accumulators; Heat exchangers not being parts of machines; Heat exchangers, other than parts of machines; Heat generators; Heat pumps; Heat recovery ventilators; Heating elements; Heating installations; Heating panels used for indoor heating purposes; Accessories for fireplaces, namely, air circulation kits consisting primarily of metal ducts and metal adaptors used to increase the amount of heat recovered from the fireplace using a blower or natural convection; Apparatus for the exchange of substances and heat for use in the production of steam, for use in cooking and for use in refrigeration; Central air-conditioning installations; Central heating boilers; Components for air conditioning and cooling systems, namely, evaporative air coolers; Drying apparatus for use in heating, ventilation systems, air conditioning systems and refrigeration systems; Electric heaters for commercial use; Electronic generator for use in controlling the amount of humidity in the air by creating, removing or circulating small water particles or water vapor in the air; Fans for air conditioning apparatus; Filters and filtering devices for air and gas conditioning; Furnace boilers; Gas fired water heaters; Heating boilers; Heating systems for residential and commercial buildings comprised of boilers, valves, pipes, manifolds, control panel switches, and electrical wire, all sold as a unit; Heating systems for residential and commercial buildings comprised of boilers, valves, pipes, manifolds, solar panels, control panel, switches and electrical wire, all sold as a unit; Heating systems for residential and commercial buildings comprised of biomass burners, boilers, valves, pipes, manifolds, solar panels, control panels, switches and electrical wire, all sold as a unit; Hot water tanks; Humidifiers for central heating radiators; Industrial boilers; Parts for heating and air conditioning systems, namely, heater cores and gas coolers for vehicles; Radiators; Steam heating apparatus; Stoves being heating apparatus; Ventilating exhaust fans; Ventilating, high-velocity fixed exhaust fans for commercial and agricultural use; Ventilating, high-velocity portable exhaust fans for commercial and agricultural use

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Jan. 01, 1996 **Use in Commerce:** Jan. 01, 1996

Basis Information (Case Level)

Filed Use: Yes **Currently Use:** Yes

Filed ITU: No **Currently ITU:** No

Filed 44D: No **Currently 44E:** No

Filed 44E: No **Currently 66A:** No

Filed 66A: No **Currently No Basis:** No

Filed No Basis: No

Current Owner(s) Information

Owner Name: Stamm International Corporation

Owner Address: Suite 76
418 Central Park West
New York, NEW YORK UNITED STATES 10025

Legal Entity Type: CORPORATION **State or Country Where Organized:** DELAWARE

Attorney/Correspondence Information

Attorney of Record

Attorney Name: Philip M. Stamm

Attorney Primary Email Address: stamm@pobox.com **Attorney Email Authorized:** Yes

Correspondent

Correspondent Name/Address: PHILIP M. STAMM
STAMM & OLIVO, LLP
418 CENTRAL PARK WEST
SUITE 76
NEW YORK, NEW YORK UNITED STATES 10025

Phone: 212-267-7900

Correspondent e-mail: stamm@pobox.com philipmstamm@gmail.com **Correspondent e-mail Authorized:** Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Dec. 28, 2021	REGISTERED-PRINCIPAL REGISTER	
Oct. 12, 2021	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Oct. 12, 2021	PUBLISHED FOR OPPOSITION	
Sep. 22, 2021	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Sep. 07, 2021	APPROVED FOR PUB - PRINCIPAL REGISTER	
Sep. 07, 2021	EXAMINER'S AMENDMENT ENTERED	88888
Sep. 07, 2021	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Sep. 07, 2021	EXAMINERS AMENDMENT E-MAILED	6328
Sep. 07, 2021	EXAMINERS AMENDMENT -WRITTEN	81853
Sep. 07, 2021	PREVIOUS ALLOWANCE COUNT WITHDRAWN	
Sep. 07, 2021	APPROVED FOR PUB - PRINCIPAL REGISTER	
Sep. 07, 2021	EXAMINER'S AMENDMENT ENTERED	88888
Sep. 07, 2021	NOTIFICATION OF EXAMINERS AMENDMENT E-MAILED	6328
Sep. 07, 2021	EXAMINERS AMENDMENT E-MAILED	6328
Sep. 07, 2021	EXAMINERS AMENDMENT -WRITTEN	81853
Aug. 21, 2021	ASSIGNED TO EXAMINER	81853
May 04, 2021	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	

Feb. 04, 2021 NEW APPLICATION ENTERED

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION **Date in Location:** Dec. 28, 2021

CIRC-AIR®
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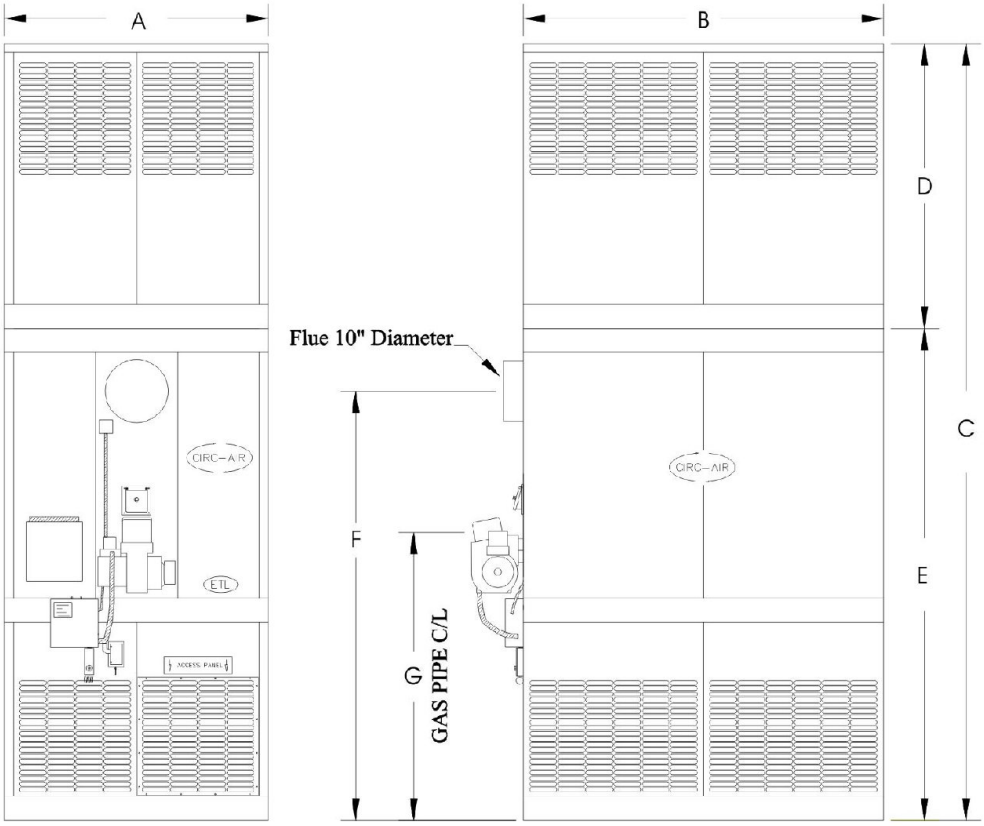
AIR CIRCULATION HEATER



MATERIAL

Panels: 18 GA Galvanized Steel
Supports: 14 Ga. Structural Steel
Primary& Secondary Heat Exchanger: 14 Ga. SS
Fan Assembly: Vibration & Noise Isolation Mounting
Return Air Thermostat: Factory Wired with Night set back
Oil Connection: ¼"

OPTIONS

Burners: ☐ Nat Gas ☐ LP Gas ☐ #2 Oil

Discharge: ☐ 3 Way ☐ 4 Way

4 Ft Extension(s): ☐ One ☐ Two ☐ Three

LIMITED WARRANTY

10 year warranty on heat exchanger
1 year warranty on motors and electrical

SPEC'S

Series:	7400S	7400SS
CFM:	10,000	20,000
MBH Input:	400	840
Fan:	36" Dia.	48" Dia.
Motor HP:	3/4	1-1/2
Weight:	1,200 #	1,800 #
Flue Dia.:	10"	10"
Elec V-Ph:	115	115/230-1
Oil-Fla:	17.4	19/10
Gas-Fla:	15.4	18/9
Min C.P.:	20	22/11
Gas Conn.	3/4"	1"

DIMENSION'S

	7400S	7400SS
A:	3'-8"	4'-6"
B:	5'-0"	6'-0"
C:	10'-10"	10'-10"
D:	4'-0"	2'-8"
E:	6'-10"	8'-2"
F:	72"	88"
G:	50"	64"

REV 12-11-14


CIRC-AIR

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Mark: COOLSSMANN

US Serial Number: 90230903

Application Filing Date: Oct. 01, 2020

US Registration Number: 6886876

Registration Date: Nov. 01, 2022

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: Nov. 01, 2022

Publication Date: Aug. 16, 2022

Mark Information

Mark Literal Elements: COOLSSMANN

Standard Character Claim: No

Mark Drawing Type: 3 - AN ILLUSTRATION DRAWING WHICH INCLUDES WORD(S)/ LETTER(S)/NUMBER(S)

Description of Mark: The mark consists of the stylized characters "COOLSSMANN". The bottom of the letter "L" extends to create the bottom of the letter "S". The middle vertical line of the letter "M" is replaced with a dot. The middle horizontal line of the letter "A" is replaced with a dot.

Design Search Code(s): 26.01.13 - Two circles; Circles, two (not concentric)
26.01.21 - Circles that are totally or partially shaded.
27.03.01 - Geometric figures forming letters, numerals or punctuation

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Freezers; Refrigerated merchandise display cases; Refrigerating appliances and installations; Refrigerating cabinets; Refrigerating display cabinets; Refrigerating machines and installations; Refrigerating or freezing showcases; Refrigerator shelving, drawers, bins and trays; Refrigerators; Commercial ice cream freezers; Commercial refrigerators and freezers and replacement parts and fittings therefor; Components for air conditioning and cooling systems, namely, evaporative air coolers; Electric coolers; Electric freezers; Fridge-freezers; Industrial cooling apparatus, namely, compax coolers; Laboratory freezers; Portable evaporative air coolers; Refrigerators and freezers for household use and replacement parts and fittings therefor; Thermoelectric cooler/heater for food and beverages; Walk-in coolers; Walk-in freezers; Walk-in refrigerators; Water coolers; Wine refrigerators; Wine coolers, namely, refrigerated cabinets containing racks for wine bottles and storage shelves

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Feb. 01, 2020

Use in Commerce: Feb. 01, 2020

Basis Information (Case Level)

Filed Use:	Yes	**Currently Use:**	Yes
Filed ITU:	No	**Currently ITU:**	No
Filed 44D:	No	**Currently 44E:**	No
Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Coolssmann Corporation

Owner Address: 11331 183rd Street, Suite 1110
Cerittos, CALIFORNIA UNITED STATES 90703

Legal Entity Type: CORPORATION

State or Country Where Organized: CALIFORNIA

Attorney/Correspondence Information

Attorney of Record - None

Correspondent

Correspondent Name/Address: Coolssmann Corporation
11331 183rd Street, Suite 1110
Cerittos, CALIFORNIA UNITED STATES 90703

Phone: 624533617

Correspondent e-mail: ttu@toolots.com jzhu@toolots.com

Correspondent e-mail Authorized: Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
Nov. 01, 2022	NOTICE OF REGISTRATION CONFIRMATION EMAILED	
Nov. 01, 2022	REGISTERED-PRINCIPAL REGISTER	
Aug. 16, 2022	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Aug. 16, 2022	PUBLISHED FOR OPPOSITION	
Jul. 27, 2022	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Jul. 13, 2022	APPROVED FOR PUB - PRINCIPAL REGISTER	
Jul. 11, 2022	SUSPENSION CHECKED Â– TO ATTORNEY FOR ACTION	88889
Dec. 27, 2021	REPORT COMPLETED SUSPENSION CHECK CASE STILL SUSPENDED	88889
Jun. 21, 2021	NOTIFICATION OF LETTER OF SUSPENSION E-MAILED	6332
Jun. 21, 2021	LETTER OF SUSPENSION E-MAILED	6332
Jun. 21, 2021	SUSPENSION LETTER WRITTEN	83706
Jun. 17, 2021	TEAS/EMAIL CORRESPONDENCE ENTERED	70633
Jun. 17, 2021	CORRESPONDENCE RECEIVED IN LAW OFFICE	70633
Jun. 11, 2021	APPLICANT/CORRESPONDENCE CHANGES (NON-RESPONSIVE) ENTERED	88888
Jun. 11, 2021	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Jun. 11, 2021	TEAS CHANGE OF OWNER ADDRESS RECEIVED	
Jun. 11, 2021	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Jun. 10, 2021	TEAS RESPONSE TO OFFICE ACTION RECEIVED	
Jun. 08, 2021	NOTIFICATION OF NOTICE OF UNRESPONSIVE AMENDMENT - E-MAILED	
Jun. 08, 2021	NOTICE OF UNRESPONSIVE AMENDMENT - E-MAILED	
Jun. 08, 2021	REPORT UNRESPONSIVE AMENDMENT - COMPLETED	83706
Jun. 07, 2021	TEAS/EMAIL CORRESPONDENCE ENTERED	70633
Jun. 07, 2021	CORRESPONDENCE RECEIVED IN LAW OFFICE	70633
Jun. 02, 2021	ASSIGNED TO LIE	70633
Mar. 02, 2021	TEAS RESPONSE TO OFFICE ACTION RECEIVED	

Mar. 02, 2021	APPLICANT/CORRESPONDENCE CHANGES (NON-RESPONSIVE) ENTERED	88888
Mar. 02, 2021	TEAS CHANGE OF CORRESPONDENCE RECEIVED	
Mar. 02, 2021	TEAS CHANGE OF OWNER ADDRESS RECEIVED	
Feb. 25, 2021	NOTIFICATION OF NON-FINAL ACTION E-MAILED	6325
Feb. 25, 2021	NON-FINAL ACTION E-MAILED	6325
Feb. 25, 2021	NON-FINAL ACTION WRITTEN	83706
Feb. 25, 2021	ASSIGNED TO EXAMINER	83706
Nov. 18, 2020	NOTICE OF DESIGN SEARCH CODE E-MAILED	
Nov. 17, 2020	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Oct. 05, 2020	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location: PUBLICATION AND ISSUE SECTION **Date in Location:** Nov. 01, 2022


COOLSHAN

Generated on: This page was generated by TSDR on 2023-07-31 12:41:25 EDT

Mark: LESUDA

Lesuda

US Serial Number: 97366787

Application Filing Date: Apr. 16, 2022

US Registration Number: 7061757

Registration Date: May 23, 2023

Filed as TEAS Plus: Yes

Currently TEAS Plus: Yes

Register: Principal

Mark Type: Trademark

TM5 Common Status Descriptor:

LIVE/REGISTRATION/Issued and Active

The trademark application has been registered with the Office.

Status: Registered. The registration date is used to determine when post-registration maintenance documents are due.

Status Date: May 23, 2023

Publication Date: Mar. 07, 2023

Mark Information

Mark Literal Elements: LESUDA

Standard Character Claim: Yes. The mark consists of standard characters without claim to any particular font style, size, or color.

Mark Drawing Type: 4 - STANDARD CHARACTER MARK

Translation: The wording "Lesuda" has no meaning in a foreign language.

Goods and Services

Note:
The following symbols indicate that the registrant/owner has amended the goods/services:

- Brackets [..] indicate deleted goods/services;
- Double parenthesis ((..)) identify any goods/services not claimed in a Section 15 affidavit of incontestability; and
- Asterisks *..* identify additional (new) wording in the goods/services.

For: Humidifiers; Lamps; Air-conditioning installations; Air conditioners for vehicles; Components for air conditioning and cooling systems, namely, evaporative air coolers; Evaporators for air conditioners; Fans for air conditioning apparatus; Filters for air conditioning; Portable air conditioners; Replacement components for automotive air conditioners, namely, driers and blower motors

International Class(es): 011 - Primary Class

U.S Class(es): 013, 021, 023, 024, 031, 034

Class Status: ACTIVE

Basis: 1(a)

First Use: Dec. 22, 2021

Use in Commerce: Dec. 22, 2021

Basis Information (Case Level)

Filed Use: Yes

Currently Use: Yes

Filed ITU: No

Currently ITU: No

Filed 44D: No

Currently 44E: No

Filed 44E:	No	**Currently 66A:**	No
Filed 66A:	No	**Currently No Basis:**	No
Filed No Basis:	No		

Current Owner(s) Information

Owner Name: Zeng, Xianhong

Owner Address: No. 301, Yanjiang Road,
Yining Town, Xiushui County,
Jiujiang CHINA 332499

Legal Entity Type:	INDIVIDUAL	**Citizenship:**	CHINA

Attorney/Correspondence Information

Attorney of Record

Attorney Name:	Jacob Ong	**Docket Number:**	IPLaw03100
Attorney Primary Email Address:	ONGSLAWFIRM@outlook.com	**Attorney Email Authorized:**	Yes

Correspondent

Correspondent Name/Address: JACOB ONG
PO BOX 403
LEHI, UTAH UNITED STATES 84043

Phone: 801-404-4816

Correspondent e-mail:	ONGSLAWFIRM@outlook.com IPasinlaw@hotmail.com jacob@ongslaw.com	**Correspondent e-mail Authorized:**	Yes

Domestic Representative - Not Found

Prosecution History

Date	Description	Proceeding Number
May 23, 2023	NOTICE OF REGISTRATION CONFIRMATION EMAILED	
May 23, 2023	REGISTERED-PRINCIPAL REGISTER	
Mar. 07, 2023	OFFICIAL GAZETTE PUBLICATION CONFIRMATION E-MAILED	
Mar. 07, 2023	PUBLISHED FOR OPPOSITION	
Feb. 15, 2023	NOTIFICATION OF NOTICE OF PUBLICATION E-MAILED	
Feb. 02, 2023	APPROVED FOR PUB - PRINCIPAL REGISTER	
Feb. 02, 2023	ASSIGNED TO EXAMINER	77769
Apr. 22, 2022	NEW APPLICATION OFFICE SUPPLIED DATA ENTERED	
Apr. 20, 2022	NEW APPLICATION ENTERED	

TM Staff and Location Information

TM Staff Information - None

File Location

Current Location:	PUBLICATION AND ISSUE SECTION	**Date in Location:**	May 23, 2023



Lesuda Portable air conditioners Small air conditioner USB mini portable cold air rechargeable portable air conditioner

US $48.10

US $4.50 Coupons For You Get coupons

Quantity:

− 1 + 15 Pieces available

Ships to United States

Shipping: US $12.46
From China to United States via AliExpress Standard Shipping
Estimated delivery on May 31 More options

Buy Now Add to Cart ♡

75-Day Buyer Protection
Money back guarantee

Shop912625811 Store

Shop912625811 Store

0.0% Positive Feedback
8 Followers
Contact

+ Follow Visit Store

Store Categories

Others

Top Selling

US $81.10
3 Sold

US $89.10
1 Sold

DESCRIPTION CUSTOMER REVIEWS (0) SPECIFICATIONS

Product gross weight: 1.0kg

Features: Automatically turn off the screen

Category: Semiconductor Refrigeration

Control method: mechanical

Heating and cooling type: single cold

Shop912625811 Store

DESCRIPTION CUSTOMER REVIEWS (0) SPECIFICATIONS Buy Now Add to Cart

US $110.10

2 Sold

US $84.10

2 Sold

US $54.10

1 Sold

View More >

No Feedback.

More To Love

Simple Tarot Flower Butterfly...

US $1.13
~~US $8.98~~ -87%
New User Bonus
348 sold ★4.7
Free Shipping

304 Stainless Steel Wall Ceilin...

US $5.01
350 sold ★4.8

Plastic Access Panel for Dryw...

US $4.71
95 sold ★4.9
Free Shipping
Free Return

Newest Window Adaptor Con...

US $17.14
New User Deal
76 sold ★5
Free Shipping

304 Stainless Steel Roof Venti...

US $20.02
48 sold ★4.5

New Retro Turkish Handmad...

US $1.33
33 sold

Window Adaptor Connector ...

US $8.18
28 sold ★5

Stainless Steel Ventilation Ex...

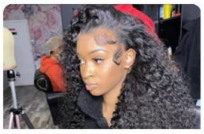
US $1.39
360 sold ★4.7

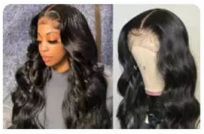
Waterproof Stainless Steel Ve...

US $9.95
28 sold ★5

Rose Shape Vagina Sucking V...

US $19.65
Limited Offer
10395 sold ★4.9
Free Shipping





Orders
- All Orders
- Refunds & Disputes
- Export Orders
- Shipping Risk Assesment

Logistics
- Aliexpress Logistics Introduction
- Logistic center
- Logistics Service
- Air Mail Orders
- Cainiao Seller Workbench
- Logistic Solution Look-up

Funds Account
- Change to RMB
- Finance Report(Offline Soon)
- Fund Center(New)
- Advance Fund Management
- Advance Fund Pay Back
- Alipay International Account
- Credit Loan
- AliExpress Business Loan

Manage Feedback
- Manage Feedback

Tax Management
- Product Tax-code
- VAT Help Center

All Orders >

Order Details

Order State

Order ✓ Payment ✓ Shipping ✓ Completion ✓

Completed

Reminder: Order complete time: 2022-01-23 08:27

Refund the buyer

Shipment Information

Shipping Time	Shipping Method	Tracking number	Actions
2021-12-22 05:49	e邮宝	LY356385875CN	View details

Order Overview

Order ID
8016815714446210 Copy

Buyer
Vasili Kuzniatsou
Contact Report Buyer Blacklist

Note
Edit Note

Receiver Address
Receiver
Address
Zip Code
Phone
CPF
[redacted] United States
Copy

Product Information	Unit Price	Quantity	Amount	Services	Shipping Method
 Lesuda Portable air conditioners Small air con… (null null)	US $48.10	1	US $48.10		ePacket US $1.05 Estimated delivery: 37 - 37 working days Shipment preparation time: 3 days

Fund details

Order amount

Product Total	Shipping Cost	Adjustment	duty	Store Promotion	Order amount	Platform Commission	Affiliate Commission	Amount paid
US $48.10	US $1.05	US $0.00	-	-US $0.00 Details	US $49.15	-US $0.06	-US $0.00	US $49.09

Payment details

Total amount paid	Payment time	Payment method
US $49.09	2021-12-21 01:44	WM_EBANK

Orders
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- Shipping Risk Assesment

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- Advance Fund Management
- Advance Fund Pay Back
- Alipay International Account
- Credit Loan
- AliExpress Business Loan

Manage Feedback
- Manage Feedback

Tax Management
- Product Tax-code
- VAT Help Center

All Orders >

Order Details

Order State

Order ✓ Payment ✓ Shipping ✓ Completion ✓

Completed

Reminder: Order complete time: 2022-02-27 13:54

Refund the buyer

Shipment Information

Shipping Time	Shipping Method	Tracking number	Actions
2022-01-26 10:32	e邮宝	LY356057042CN	View details

Order Overview

Order ID
8016823162745490 Copy

Buyer
Milena Flores Estevez
Contact Report Buyer Blacklist

Note
Edit Note

Receiver Address
Receiver
Address
Zip Code
Phone
CPF
Copy
United States

Product Information	Unit Price	Quantity	Amount	Services	Shipping Method
 Lesuda Portable air conditioners Small air con… (null null)	US $48.10	1	US $48.10		ePacket US $1.05 Estimated delivery: 37 - 37 working days Shipment preparation time: 3 days

Fund details

Order amount

Product Total	Shipping Cost	Adjustment	duty	Store Promotion	Order amount	Platform Commission	Affiliate Commission	Amount paid
US $48.10	US $1.05	US $0.00	-	-US $0.00 Details	US $49.15	-US $0.06	-US $0.00	US $49.09

Payment details

Total amount paid	Payment time	Payment method
US $49.09	2022-01-25 07:27	WM_EBANK

Orders
- All Orders
- Refunds & Disputes
- Export Orders
- Shipping Risk Assesment

Logistics
- Aliexpress Logistics Introduction
- Logistic center
- Logistics Service
- Air Mail Orders
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- Logistic Solution Look-up

Funds Account
- Change to RMB
- Finance Report(Offline Soon)
- Fund Center(New)
- Advance Fund Management
- Advance Fund Pay Back
- Alipay International Account
- Credit Loan
- AliExpress Business Loan

Manage Feedback
- Manage Feedback

Tax Management
- Product Tax-code
- VAT Help Center

All Orders >

Order Details

Order State

Order ✓ Payment ✓ Shipping ✓ Completion ✓

Completed

Reminder: Order complete time: 2022-03-15 20:15

Refund the buyer

Shipment Information

Shipping Time	Shipping Method	Tracking number	Actions
2022-02-14 18:29	e邮宝	LY354943904CN	View details

Order Overview

Order ID
8016815555306042 Copy

Buyer
VOM BAUER KARL
Contact Report Buyer Blacklist

Note
Edit Note

Receiver Address
Receiver [redacted]
Address [redacted]
United States
Zip Code [redacted]
Phone [redacted]
CPF
Copy

Product Information	Unit Price	Quantity	Amount	Services	Shipping Method
 Lesuda Portable air conditioners Small air con... (null null)	US $48.10	1	US $48.10		ePacket US $1.05 Estimated delivery: 37 - 37 working days Shipment preparation time: 3 days

Fund details

Order amount

Product Total	Shipping Cost	Adjustment	duty	Store Promotion	Order amount	Platform Commission	Affiliate Commission	Amount paid
US $48.10	US $1.05	US $0.00	-	US $48.10 Details	US $49.15	-US $0.06	-US $0.00	US $49.09

Payment details

Total amount paid	Payment time	Payment method
US $49.09	2022-02-13 15:36	WM_EBANK

United States Patent and Trademark Office (USPTO)

USPTO OFFICIAL NOTICE

Reexamination and/or Expungement
Proceeding No. 2022-100137E

Office Action (Official Letter) issued
on August 2, 2023 for
U.S. Trademark Registration No. 5376467

The USPTO has issued an Office action in a proceeding involving your registration. No response is required.

(1) Read the Office action. This email is NOT the Office action.

(2) Direct general questions about using USPTO electronic forms, the USPTO website, the proceeding process, the status of your registration, and whether there are outstanding deadlines to the Trademark Assistance Center (TAC).

After reading the Office action, address any question(s) regarding the specific content to the USPTO examiner identified in the Office action.

GENERAL GUIDANCE

- **Check the status of your registration periodically** in the Trademark Status & Document Retrieval (TSDR) database to avoid missing critical deadlines.

- **Update your correspondence email address**, if needed, to ensure you receive important USPTO notices about your registration.

- **Beware of trademark-related scams**. Protect yourself from people and companies that may try to take financial advantage of you. Private companies may call you and pretend to be the USPTO or may send you communications that resemble official USPTO documents to trick you. We will never request your credit card number or social security number over the phone. And all official USPTO correspondence will only be emailed from the domain "@uspto.gov." Verify the correspondence originated from us by using your registration number in our database, TSDR, to confirm that it appears under the "Documents" tab, or contact the Trademark Assistance Center.

- **Hiring a U.S.-licensed attorney**. If you do not have an attorney and are not required to have one under the trademark rules, we encourage you to hire a U.S.-licensed attorney specializing in trademark law to help guide you through the expungement and/or reexamination proceeding process.