

	Title	Protocol Number
	Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification

Objective:

The objective of this test is to verify that the major components are installed in accordance with manufacturer's specifications, design criteria, safety features, and other Aphena requirements as specified.

Procedure:

1. Verify that the information collected during field verification is installed in the New Blending Suite and is accurate and meets engineering and Aphena requirements.
2. For Method of Verification:
 - V – Visual observation
 - D – Documentation

Acceptance Criteria:

The major components are installed in accordance with manufacturer's specifications, design criteria, safety features, and other Mary Kay requirements as specified.

Result:

Have the acceptance criteria been met? (Y/N) Y If Not, Deviation No: N/A

Performed By: Villa Ruiz Date: 10/07/2020
 Reviewed By: Hughes Date: 10/07/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AHU – 1A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	1A	AHU - 1A	MPR 10/02/2020
Make:	TRANE	Yes	MPR 10/02/2020
Model:	TEM4AOCOS51SVA	Yes	MPR 10/02/2020
Serial No.:	19322XT43V	Yes	MPR 10/02/2020
Horsepower:	3/4	Yes	MPR 10/02/2020
Design Air Flow:	1620 CFM ①	Yes	MPR 10/02/2020
Area Served:	T1 (B25) ①	Yes	MPR 10/02/2020
General	Unit is installed level	Yes	MPR 10/02/2020
	Interior and components are clean	Yes	MPR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	MPR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	MPR 10/02/2020

Comments:

① Refer to drawing APS1902 M-1-M1 , Attachment 10. MPR 10/02/2020

N/A MPR 10/02/2020

Performed By: V. Establier Date: 10/02/2020

Reviewed By: H. Smith Date: 10/02/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AHU – 2A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	2A	AHU - 2A	JPR 10/02/2020
Make:	TRANE	Yes	JPR 10/02/2020
Model:	TEM4AOCOS51SVA	Yes	JPR 10/02/2020
Serial No.:	19144CNN3V	Yes	JPR 10/02/2020
Horsepower:	3/4	Yes	JPR 10/02/2020
Design Air Flow:	1600 CFM ⁽¹⁾	Yes	JPR 10/02/2020
Area Served:	T2 (B24) ⁽¹⁾ ₍₂₎	Yes	JPR 10/02/2020
General	Unit is installed level	Yes	JPR 10/02/2020
	Interior and components are clean	Yes	JPR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	JPR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	JPR 10/02/2020

Comments:

- (1) Refer to drawing APS 1902 M-1-M1, Attachment 10. JPR 10/02/2020
(2) AHU-2A supplies 100 CFM to "ANTE" room. JPR 10/02/2020

Performed By: Redacting Date: 10/02/2020

Reviewed By: Redacting Date: 10/02/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AHU – 3A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	3A	AHU-3A	MR 10/02/2020
Make:	TRANE	Yes	MR 10/02/2020
Model:	TEM4AOCOS51SVA	Yes	MR 10/02/2020
Serial No.:	19051S8A3V	Yes	MR 10/02/2020
Horsepower:	3/4	Yes	MR 10/02/2020
Design Air Flow:	1975 CFM ①	Yes	MR 10/02/2020
Area Served:	T3 (B26) ②	Yes	MR 10/02/2020
General	Unit is installed level	Yes	MR 10/02/2020
	Interior and components are clean	Yes	MR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	MR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	MR 10/02/2020

Comments:

① Refer to drawing APS1902 M-1-M1, Attachment 10. MR 10/02/2020

② AHU-3A supplies 100 CFM to "ANTE" room. MR 10/02/2020

Performed By: K. Dahlberg Date: 10/02/2020

Reviewed By: M. Smith Date: 10/02/2020



Title		Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1		IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AHU – 1A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual Voltage compatible with equipment rating	Volts: 208	APR 10/05/2020
	Rated amperage exceeds equipment rating	Phase: 1	
		Amps: 20	
Equipment Rating (from nameplate)	Volts: 208V	Volts: 208	APR 10/05/2020
	Phase: One (1)	Phase: 1	
	Frequency: 60 Hz	Frequency: 60	
Panel / Circuit	Record Actual	LP/ 11.9	APR 10/07/2020
Electrical Power	Capable of Lockout	Yes	APR 10/07/2020
Electrical Power	Grounded	Yes	APR 10/07/2020
Circuit (Actual values)	Volts: 208 (+10%)	Volts: 206.8	APR 10/07/2020
Circuit (Actual values)	Amps: 8 (+10%)	Amps: 6.0	APR 10/07/2020

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10 Feb 20	10 Feb 21	APR 10/07/2020

Electrician Name (Print)	Shovanny Larson	License No.	N/A	Sign / Date	APR 10/07/2020
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Comments:

NA APR 10/07/2020

Performed By: V. Hallberg Date: 10/07/2020

Reviewed By: H. Wark Date: 10/07/20



Title		Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1		IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AHU – 2A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual	Volts: 208	APR 10/07/2020
	Voltage compatible with equipment rating	Phase: 1	
	Rated amperage exceeds equipment rating	Amps: 20	
Equipment Rating (from nameplate)	Volts: 208V	Volts: 208	APR 10/05/2020
	Phase: One (1)	Phase: 1	
	Frequency: 60 Hz	Frequency: 60	
Panel / Circuit	Record Actual	LP / 7.5	APR 10/07/2020
Electrical Power	Capable of Lockout	Yes	APR 10/07/2020
Electrical Power	Grounded	Yes	APR 10/07/2020
Circuit (Actual values)	Volts: 208 (+10%)	Volts: 208.5	APR 10/07/2020
Circuit (Actual values)	Amps: 8 (+10%)	Amps: 6.15	APR 10/07/2020

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10 Feb 20	10 Feb 21	APR 10/07/2020

Electrician Name (Print)	Shovanny Laren	License No.	N/A	Sign / Date	APR 10/07/2020
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Comments:

N/A APR 10/07/2020

Performed By: APR 10/07/2020 Date: 10/07/2020

Reviewed By: APR 10/07/2020 Date: 10/07/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AHU – 3A

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual	Volts: 208	APL 10/05/2020
	Voltage compatible with equipment rating	Phase: 1	
	Rated amperage exceeds equipment rating	Amps: 20	
Equipment Rating (from nameplate)	Volts: 208V	Volts: 208	APL 10/05/2020
	Phase: One (1)	Phase: 1	
	Frequency: 60 Hz	Frequency: 60	
Panel / Circuit	Record Actual	LP/3,1	APL 10/07/2020
Electrical Power	Capable of Lockout	Yes	APL 10/07/2020
Electrical Power	Grounded	Yes	APL 10/07/2020
Circuit (Actual values)	Volts: 208 (+10%)	Volts: 208.1	APL 10/07/2020
Circuit (Actual values)	Amps: 8 (+10%)	Amps: 5.34	APL 10/07/2020

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10Feb 20	10Feb 21	APL 10/07/2020

Electrician Name (Print)	Shovanny Laren	License No.	N/A	Sign / Date	APL 10/07/2020
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Comments:

N/A APL 10/07/2020

Performed By: APPL Date: 10/07/2020

Reviewed By: APPL Date: 10/07/2020



	Title	Protocol Number
	Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AC – 1

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	AC - 1	Yes	JMR 10/02/2020
Make:	TRANE	Yes	JMR 10/02/2020
Model:	4TTA4060A400AB	Yes	JMR 10/02/2020
Serial No.:	19405U785F	Yes	JMR 10/02/2020
Compressor Model:	SBAO49B4CPA	Yes	JMR 10/02/2020
Serial Number:	19IA5676N	Yes	JMR 10/02/2020
General	Unit is installed level	Yes	JMR 10/02/2020
	Interior and components are clean	Yes	JMR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	JMR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	JMR 10/02/2020
Fan Motor Make:	Broad Ocean Motor	Yes	JMR 10/02/2020
Frame:	D159878P01	Yes	JMR 10/02/2020
Horsepower:	1/5	Yes	JMR 10/02/2020
Nominal Tons:	5 Tons	Yes	JMR 10/02/2020
Area Served:	AHU – 1A (T1, B25)	Yes	JMR 10/02/2020

Comments:

N/A JMR 10/02/2020

Performed By: Bill Higginbotham Date: 10/02/2020

Reviewed By: H. S. K. Date: 10/02/2020



	Title	Protocol Number
	Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AC – 2

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	AC - 2	Yes	NPR 10/02/2020
Make:	TRANE	Yes	NPR 10/02/2020
Model:	4TTA4060A400AB	Yes	NPR 10/02/2020
Serial No.:	19405WF35F	Yes	NPR 10/02/2020
Compressor Model:	SBAO49B4CPA	Yes	NPR 10/02/2020
Serial Number:	19IA5662N	Yes	NPR 10/02/2020
General	Unit is installed level	Yes	NPR 10/02/2020
	Interior and components are clean	Yes	NPR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	NPR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	NPR 10/02/2020
Fan Motor Make:	Broad Ocean Motor	Yes	NPR 10/02/2020
Frame:	D159878P01	Yes	NPR 10/02/2020
Horsepower:	1/5	Yes	NPR 10/02/2020
Nominal Tons:	5 Tons	Yes	NPR 10/02/2020
Area Served:	AHU – 2A (T2, B24)	Yes	NPR 10/02/2020

Comments:

N/A NRP 10/02/2020

Performed By: Kelli Phillips Date: 10/02/2020

Reviewed By: W.H. Hahn Date: 10/02/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 – Major Components Verification (Cont.)

AC – 3

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Tag No.	AC - 3	Yes	APR 10/02/2020
Make:	TRANE	Yes	APR 10/02/2020
Model:	4TTA4060A400AB	Yes	APR 10/02/2020
Serial No.:	19405U3R5F	Yes	APR 10/02/2020
Compressor Model:	SBAO49B4CPA	Yes	APR 10/02/2020
Serial Number:	19IA5656N	Yes	APR 10/02/2020
General	Unit is installed level	Yes	APR 10/02/2020
	Interior and components are clean	Yes	APR 10/02/2020
	Equipment has been anchored as indicated on the plans / specs	Yes	APR 10/02/2020
	Vibration dampers installed as indicated on the plans / specs	Yes	APR 10/02/2020
Fan Motor Make:	Broad Ocean Motor	Yes	APR 10/02/2020
Frame:	D159878P01	Yes	APR 10/02/2020
Horsepower:	1/5	Yes	APR 10/02/2020
Nominal Tons:	5 Tons	Yes	APR 10/02/2020
Area Served:	AHU – 3A (T3, B26)	Yes	APR 10/02/2020

Comments:

N/A APR 10/02/2020

Performed By: R. Mathieu Date: 10/02/2020

Reviewed By: M. Mathieu Date: 10/02/2020



	Title	Protocol Number
	Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AC – 1

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual	Volts: 480	MR 10/05/2020
	Voltage compatible with equipment rating	Phase: 3	
	Rated amperage exceeds equipment rating	Amps: 20	
Equipment Rating (from nameplate)	Volts: 480V	Volts: 460 ⁽¹⁾	MR 10/05/2020
	Phase: Three (3)	Phase: 3	
	Frequency: 60 Hz	Frequency: 60	
Panel / Circuit	Record Actual	AC / 1, 3, 5	MR 10/05/2020
Electrical Power	Capable of Lockout / Grounded	Yes / Yes	MR 10/05/2020
Circuit (Actual values)	Volts: 480 (+10%)	L1-L2: 480.7 V	MR 10/07/2020
		L2-L3: 480.6 V	
		L3-L1: 483.3 V	
Circuit (Actual values)	Amps: 9 (+10%)	L1-L2: 5.63 Amps	MR 10/07/2020
		L2-L3: 4.73 Amps	
		L3-L1: 5.09 Amps	

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10 Feb 20	10 Feb 21	MR 10/07/2020

Electrician Name (Print)	Shovanyy Lara	License No.	N/A	Sign / Date	MR 10/07/2020
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Comments:

(1) Value is ±10% of 480 V (see actual value spec) MR 10/05/2020

Performed By: Shovanyy Lara Date: 10/07/2020

Reviewed By: Wright Date: 10/07/2020



	Title	Protocol Number
	Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AC – 2

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual Voltage compatible with equipment rating Rated amperage exceeds equipment rating	Volts: 480 Phase: 3 Amps: 20	MR 10/05/2020
	Volts: 480V	Volts: 460 ^①	
	Phase: Three (3)	Phase: 3	
Equipment Rating (from nameplate)	Frequency: 60 Hz	Frequency: 60	MR 10/05/2020
	Record Actual	AC / 7,9,11	
	Capable of Lockout / Grounded	Yes / Yes	
Circuit (Actual values)	Volts: 480 (+10%)	L1-L2: 480.7 V L2-L3: 480.1 V L3-L1: 483.4 V	MR 10/07/2020
	Amps: 9 (+10%)	L1-L2: 5.55 Amps L2-L3: 4.66 Amps L3-L1: 5.07 Amps	

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10 Feb 20	10 Feb 21	MR 10/07/2020

Electrician Name (Print)	Jhovanny Lara	License No.	N/A	Sign / Date	MR 10/07/2020
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Comments:

① Value is $\pm 10\%$ of 480 V (see actual value spec.) MR 10/05/2020

Performed By: Reliable Date: 10/07/2020

Reviewed By: Vic John Date: 10/07/2020



Title	Protocol Number
Installation/Operational Qualification for the New Blending Suite in Building 1	IQOQ2020-020 Rev 0

Attachment 8 –Major Components Verification (Cont.)

AC – 3

Installation Checks	Expected Results/ Specification	Met Expected Result? (Yes / Actual / NA)	Performed By/ Date
Circuit Rating (from panel)	Record Actual	Volts: 480	MR 10/05/2020
	Voltage compatible with equipment rating	Phase: 3	
	Rated amperage exceeds equipment rating	Amps: 20	
Equipment Rating (from nameplate)	Volts: 480V	Volts: 460 ^(D)	MR 10/05/2020
	Phase: Three (3)	Phase: 3	
	Frequency: 60 Hz	Frequency: 60	
Panel / Circuit	Record Actual	AC / 13,15,17	MR 10/05/2020
Electrical Power	Capable of Lockout / Grounded	Yes / Yes	MR 10/05/2020
Circuit (Actual values)	Volts: 480 (+10%)	L1-L2: 490.3 V	MR 10/07/2020
		L2-L3: 480.1 V	
		L3-L1: 482.9 V	
Circuit (Actual values)	Amps: 9 (+10%)	L1-L2: 5.01 Amps	MR 10/07/2020
		L2-L3: 4.79 Amps	
		L3-L1: 5.7 Amps	

Multimeter Make	Model	SN	Calibration Date	Calibration Due Date	Performed By/ Date
Fluke	87	2858	10Feb20	10Feb21	MR 10/07/2020

Electrician Name (Print)	Jhovanny Laren	License No.	N/A	Sign / Date	10/07/2020
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Comments: ^(D) Value is $\pm 10\%$ of 480 V (see actual value spec.) MR 10/05/2020

Performed By: W. Hallie Date: 10/07/2020

Reviewed By: W. Hallie Date: 10/07/2020



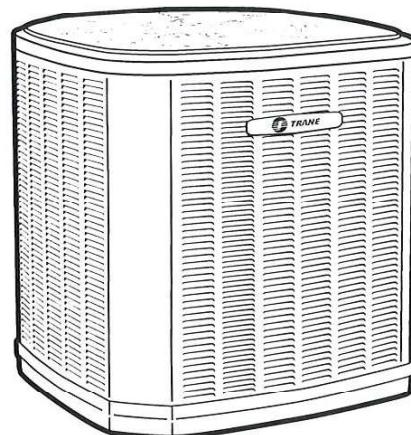
COPY

10/02/2020

Product Data

Split System Air Conditioner 3-Phase, 208/230V 3-Phase, 460V

4TTA4036A3000A
4TTA4042A3000A
4TTA4048A3000A
4TTA4060A3000A
4TTA4036A4000A
4TTA4042A4000A
4TTA4048A4000A
4TTA4060A4000A



Note: "Graphics in this document are for representation only. Actual model may differ in appearance."

October 2016

22-1928-1B-EN

Ingersoll Rand



Product Specifications

Model No. (a) (b)	4TTA4036A3000A	4TTA4042A3000A	4TTA4048A3000A	4TTA4060A3000A
POWER CONNS.—V/PH/HZ (c)	208/230/3/60	208/230/3/60	208/230/3/60	208/230/3/60
MIN. BRCH. CIR. AMPACITY	12	15	18	21
BR. CIR. PROT. RTG.—MAX. (AMPS)	20	25	30	35
COMPRESSOR	CLIMATUFF®- SCROLL	CLIMATUFF®- SCROLL	CLIMATUFF®- SCROLL	CLIMATUFF®- SCROLL
R.L. AMPS (d)—L.R. AMPS	9—71	11.2—84	13.8—83	15.9—110
Outdoor Fan FL AMPS	0.77	1.05	1.05	1.05
Fan HP	1/8	1/5	1/5	1/5
Fan Dia (inches)	23.0	27.5	27.5	27.5
Coil	SPINE FIN™	SPINE FIN™	SPINE FIN™	SPINE FIN™
Refrigerant R-410A(e)	6 LBS., 1 OZ	6 LBS., 7 OZ	6 LBS., 9 OZ	7 LBS., 10 OZ
LINE SIZE — IN. O.D. GAS (f) (g)	3/4	3/4	7/8	7/8
LINE SIZE — IN. O.D. LIQ. (h)	3/8	3/8	3/8	3/8
Charge Spec. Subcooling	10°F	12°F	10°F	10°F
Dimensions H x W X D Crated (IN.)	38 x 30.1 x 33	34.4 x 35.1 x 38.7	34.4 x 35.1 x 38.7	42.4 x 35.1 x 38.7
Weight — Shipping (lbs.)	183	216	212	246
Weight — Net (lbs.)	156	184	189	211
Optional Accessories:				
Evaporator Defrost Control	AY28X079	AY28X079	AY28X079	AY28X079
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Extreme Condition Mount Kit	BAYECMT0023	BAYECMT004	BAYECMT004	BAYECMT004
Seacoast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001	BAYSEAC001
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103	BAYLOAM103
Refrigerant Lineset (i)	TAYREFLN7*	TAYREFLN7*	TAYREFLN3*	TAYREFLN3*
Sound Enclosure	BAYSDEN003	BAYSDEN004	BAYSDEN004	BAYSDEN004
Snow Legs — 6"	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002
Snow Legs Extension — 4"	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003
Service Valve Panel Cover	TAYSVPANL3343AA	TAYSVPANL0032AA	TAYSVPANL0032AA	TAYSVPANL0044AA

(a) Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on AHRI standard 210/240.

(b) Rated in accordance with AHRI standard 270.

(c) Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

(d) This value shown for compressor RLA on the unit nameplate and on this specification sheet is used to compute minimum branch circuit ampacity and max. fuse size. The value shown is the branch circuit selection current.

(e) This value approximate. For more precise value see unit nameplate.

(f) Reference the outdoor unit ship-with literature for refrigerant piping length and lift guidelines. Reference the refrigerant piping software pub # 32-3312-xx or refrigerant piping application guide SS-APG006-xx for long line sets or specialty applications (xx denotes latest revision).

(g) Trane outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit and 15 feet of tested connecting lines. If connecting line length exceeds 15 feet, then final refrigerant charge adjustment is necessary. Each additional foot over 15 feet requires 0.6 ozs of refrigerant. See the Installer's Guide for full charging instructions.

(h) This value approximate. For more precise value see unit nameplate.

(i) * = 15, 20, 25, 30, 40 and 50 foot lineset available.



Product Specifications

Model No. ^{(a)(b)}	4TTA4036A4000A	4TTA4042A4000A	4TTA4048A4000A	4TTA4060A4000A
POWER CONNS. — V/PH/HZ ^(c)	460/3/60	460/3/60	460/3/60	460/3/60
MIN. BRCH. CIR. AMPACITY	8	8	8	9
BR. CIR. PROT. RTG. — MAX. (AMPS)	15	15	15	15
COMPRESSOR	CLIMATAUFF®- SCROLL	CLIMATUFF®- SCROLL	CLIMATUFF®- SCROLL	CLIMATUFF®- SCROLL
R.L. AMPS ^(d) — L.R. AMPS	5.8 — 38	5.6 — 44	6.2 — 41	7.1 — 52
Outdoor Fan FL AMPS	0.38	0.6	0.6	1.05
Fan HP	1/8	1/5	1/5	1/5
Fan Dia (inches)	23.0	27.5	27.5	27.5
Coil	SPINE FIN™	SPINE FIN™	SPINE FIN™	SPINE FIN™
Refrigerant R-410A ^(e)	6 LBS., 1 OZ	6 LBS., 7 OZ	6 LBS., 9 OZ	7 LBS., 10 OZ
LINE SIZE — IN. O.D. GAS ^{(f)(g)}	3/4	3/4	7/8	7/8
LINE SIZE — IN. O.D. LIQ. ^(h)	3/8	3/8	3/8	3/8
Charge Spec. Subcooling	10°F	12°F	10°F	10°F
Dimensions H x W X D Crated (IN.)	38 x 30.1 x 33	34.4 x 35.1 x 38.7	34.4 x 35.1 x 38.7	42.4 x 35.1 x 38.7
Weight — Shipping (lbs.)	183	216	212	246
Weight — Net (lbs.)	156	184	189	211
Optional Accessories:				
Evaporator Defrost Control	AY28X079	AY28X079	AY28X079	AY28X079
Rubber Isolator Kit	BAYISLT101	BAYISLT101	BAYISLT101	BAYISLT101
Extreme Condition Mount Kit	BAYECMT0023	BAYECMT004	BAYECMT004	BAYECMT004
Seacoast Kit	BAYSEAC001	BAYSEAC001	BAYSEAC001	BAYSEAC001
Low Ambient Kit	BAYLOAM103	BAYLOAM103	BAYLOAM103	BAYLOAM103
Refrigerant Lineset ⁽ⁱ⁾	TAYREFLN7*	TAYREFLN7*	TAYREFLN3*	TAYREFLN3*
Sound Enclosure	BAYSDEN003	BAYSDEN004	BAYSDEN004	BAYSDEN004
Snow Legs — 6"	BAYLEGS002	BAYLEGS002	BAYLEGS002	BAYLEGS002
Snow Legs Extension — 4"	BAYLEGS003	BAYLEGS003	BAYLEGS003	BAYLEGS003
Service Valve Panel Cover	TAYSVPANL3343AA	TAYSVPANL0032AA	TAYSVPANL0032AA	TAYSVPANL0044AA

(a) Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on AHRI standard 210/240.

(b) Rated in accordance with AHRI standard 270.

(c) Calculated in accordance with N.E.C. Only use HACR circuit breakers or fuses.

(d) This value shown for compressor RLA on the unit nameplate and on this specification sheet is used to compute minimum branch circuit ampacity and max. fuse size. The value shown is the branch circuit selection current.

(e) This value approximate. For more precise value see unit nameplate.

(f) Reference the outdoor unit ship-with literature for refrigerant piping length and lift guidelines. Reference the refrigerant piping software pub # 32-3312-xx or refrigerant piping application guide SS-APG006-xx for long line sets or specialty applications (xx denotes latest revision).

(g) Trane outdoor condensing units are factory charged with the system charge required for the outdoor condensing unit and 15 feet of tested connecting lines. If connecting line length exceeds 15 feet, then final refrigerant charge adjustment is necessary. Each additional foot over 15 feet requires 0.6 ozs of refrigerant. See the Installer's Guide for full charging instructions.

(h) This value approximate. For more precise value see unit nameplate.

(i) * = 15, 20, 25, 30, 40 and 50 foot lineset available.



Product Specifications

MODEL	A-Weighted Sound Power Level [dB(A)]	Full Octave Sound Power(dB)							
		63 Hz*	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
4TTA4036A	71	73	73	72	69	68	60	52	45
4TTA4042A	71	81	72	69	69	66	60	57	54
4TTA4048A	71	81	72	69	69	66	60	57	54
4TTA4060A	71	81	72	69	69	66	60	57	54

Note: Rated in accordance with AHRI Standard 270-2008 *For Reference Only



Accessory Description and Usage

Anti-Short Cycle Timer — Solid state timing device that prevents compressor recycling until five (5) minutes have elapsed after satisfying call or power interruptions. Use in area with questionable power delivery, commercial applications, long lineset, etc.

Evaporation Defrost Control — SPST Temperature actuated switch that cycles the condenser off as indoor coil reaches freeze-up conditions. Used for low ambient cooling to 30°F with TXV.

Rubber Isolators — Five (5) large rubber donuts to isolate condensing unit from transmitting energy into mounting frame or pad. Use on any application where sound transmission needs to be minimized.

Hard Start Kit — Start capacitor and relay to assist compressor motor startup. Use in areas with marginal power supply, on long linesets, low ambient conditions, etc.

Extreme Condition Mount Kit — Bracket kits to securely mount condensing unit to a frame or pad without removing any panels. Use in areas with high winds, or on commercial roof tops, etc.

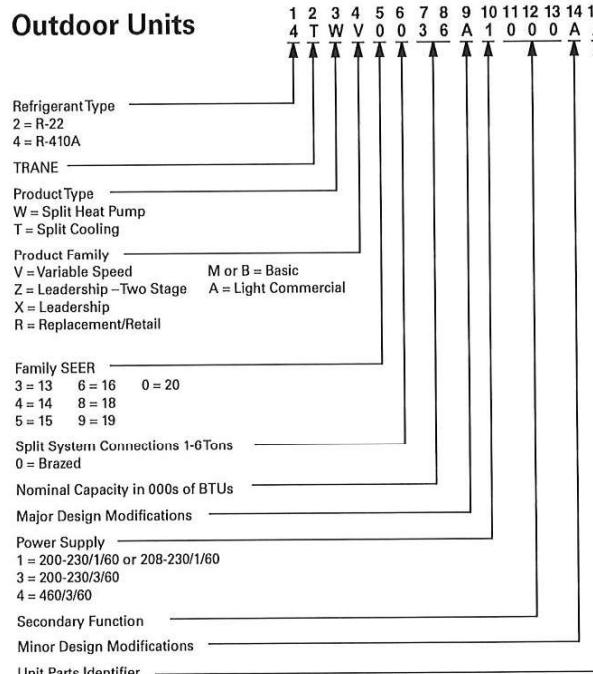
AHRI Standard Capacity Rating Conditions

AHRI Standard 210/240 Rating Conditions

1. Cooling 80°F DB, 67°F WB air entering indoor coil, 95°F DB air entering outdoor coil.
2. High Temperature Heating 47°F DB, 43°F WB air entering outdoor coil, 70°F DB air entering indoor coil.
3. Low Temperature Heating 17°F DB air entering indoor coil.
4. Rated indoor airflow for heating is the same as for cooling.

AHRI Standard 270 Rating Conditions — (Noise rating numbers are determined with the unit in cooling operations.) Standard Noise Rating number is at 95°F outdoor air.

Model Nomenclature

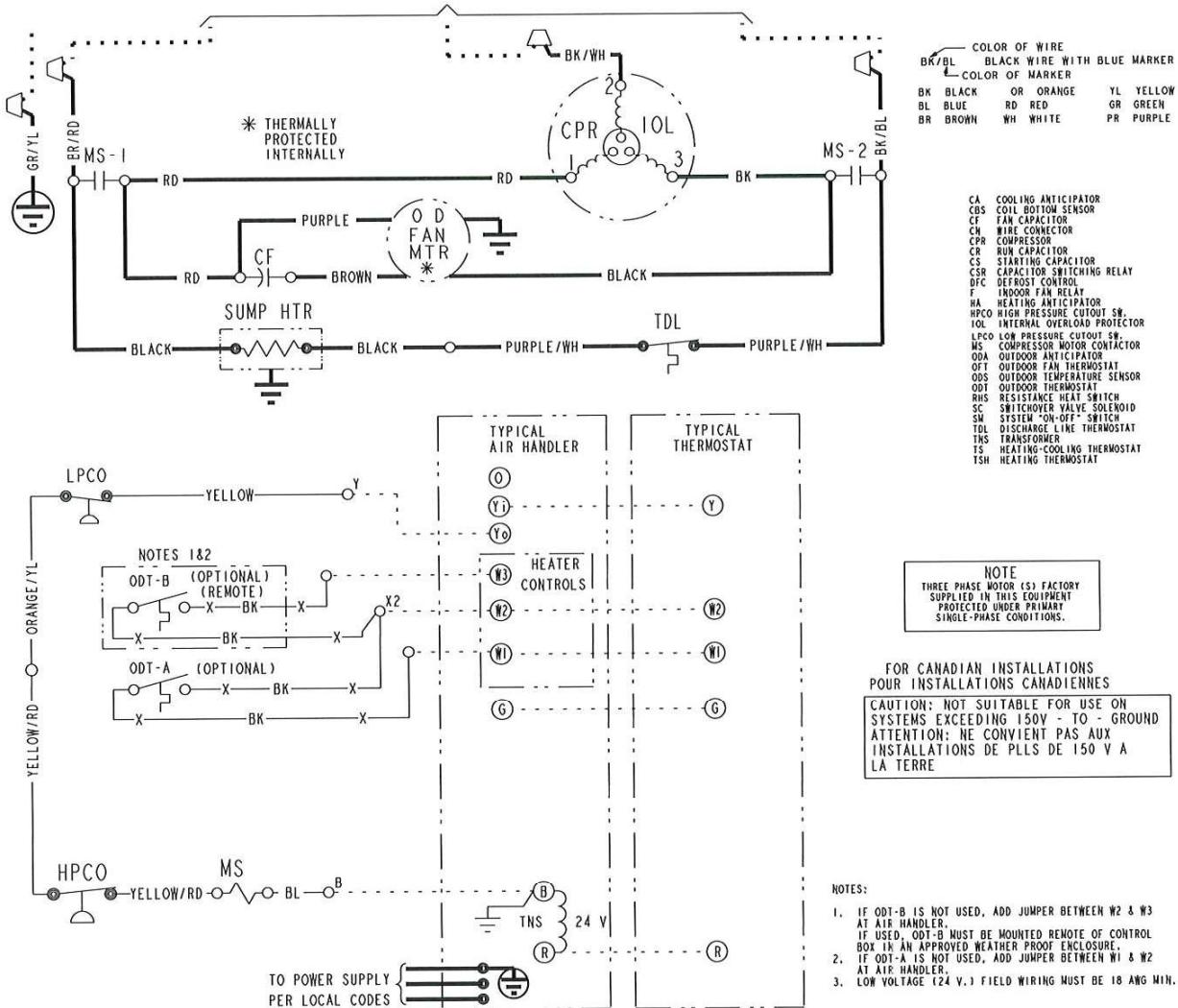




Schematic Diagrams

Figure 1. D157062P04 — 230V Models

TO POWER SUPPLY PER UNIT NAMEPLATE AND LOCAL CODES



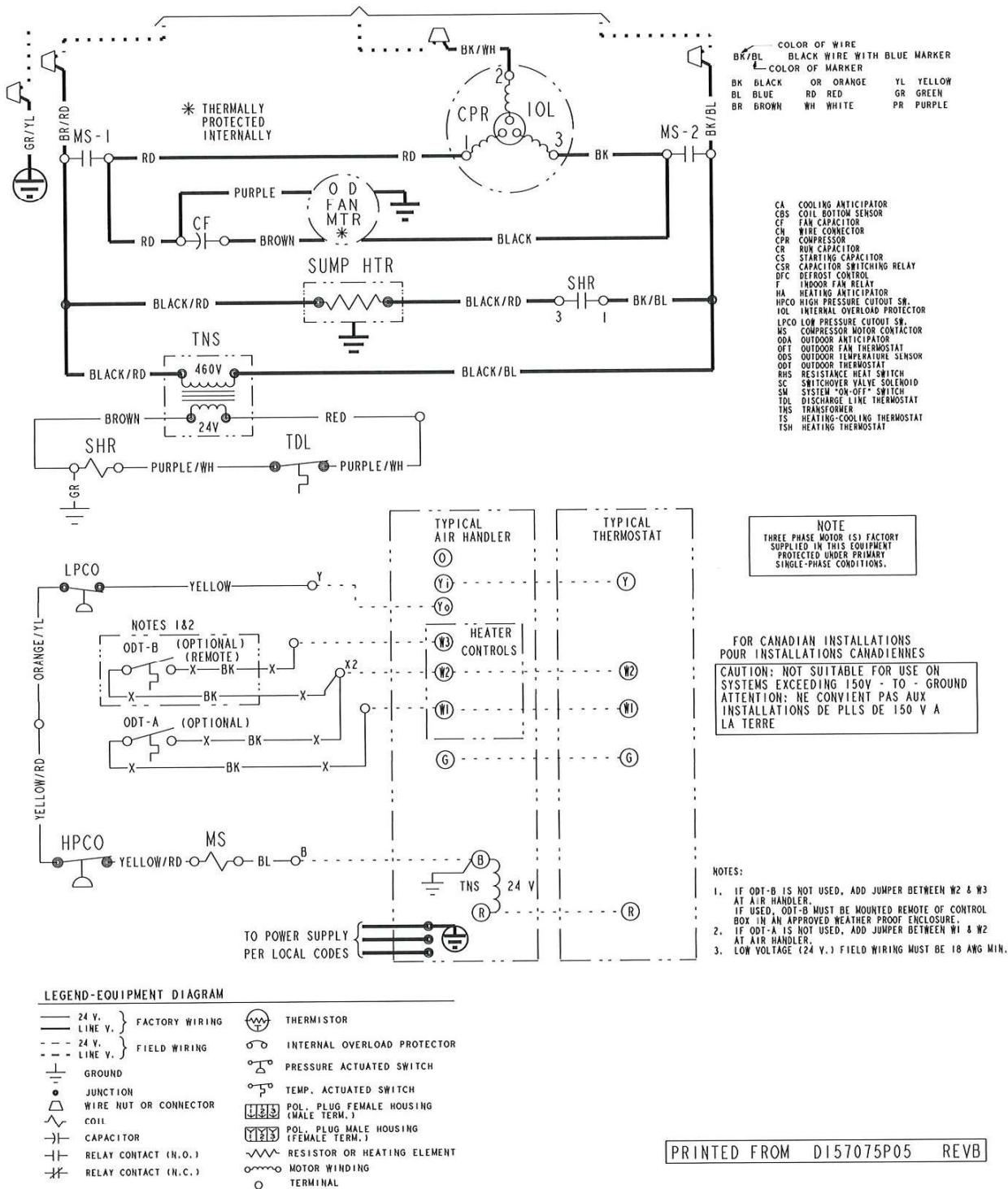
LEGEND-EQUIPMENT DIAGRAM

— 24 V. — LINE V. - - 24 V. - - LINE V.	FACTORY WIRING
— GROUND	THERMISTOR
● JUNCTION	INTERNAL OVERLOAD PROTECTOR
△ WIRE NUT OR CONNECTOR	PRESSURE ACTUATED SWITCH
~ COIL	TEMP. ACTUATED SWITCH
-+ CAPACITOR	POL. PLUG FEMALE HOUSING (MALE TERM.)
-+ RELAY CONTACT (N.O.)	POL. PLUG MALE HOUSING (FEMALE TERM.)
-+ RELAY CONTACT (N.C.)	RESISTOR OR HEATING ELEMENT
	MOTOR WINDING
	TERMINAL

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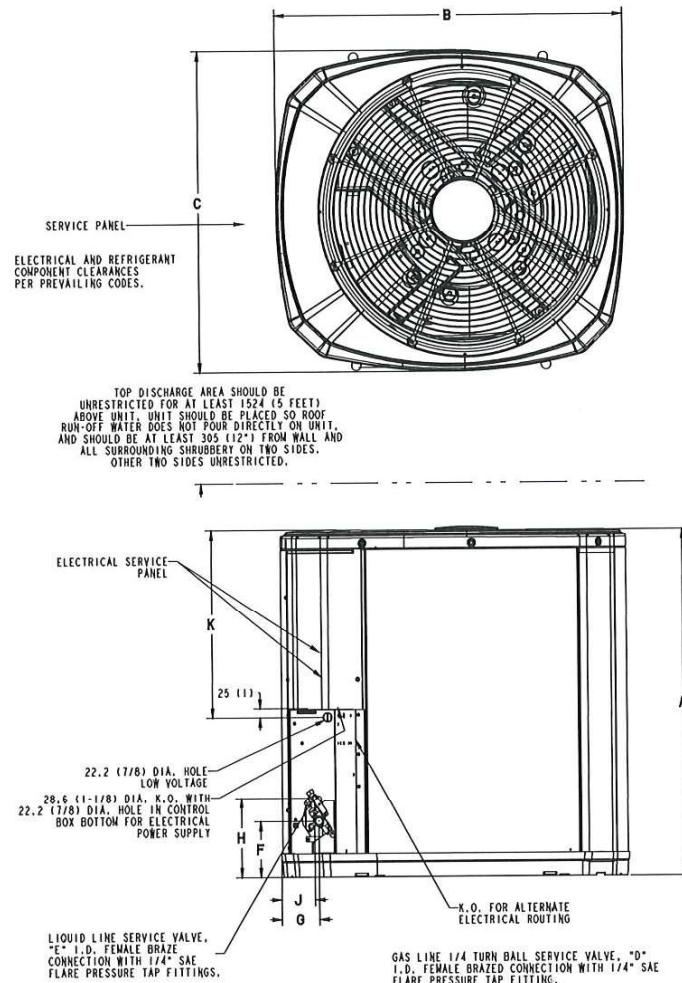
Figure 2. D157075P05 — 460V Models

TO POWER SUPPLY PER UNIT NAMEPLATE AND LOCAL CODES





Outline Drawing



Model	Base	A	B	C	D	E	F	G	H	J	K
4TTA4036A	3	832 (32-3/4)	829 (32-5/8)	756 (29-3/4)	3/4	3/8	127 (5)	76 (3)	197 (7-3/4)	60 (2-3/8)	508 (20)
4TTA4042A	4	741 (29-1/8)	946 (37-1/4)	870 (34-1/4)	3/4	3/8	143 (5-5/8)	83 (3-1-4)	206 (8-1/8)	70 (2-3/4)	508 (20)
4TTA4048A	4	741 (29-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	143 (5-5/8)	83 (3-1-4)	206 (8-1/8)	70 (2-3/4)	508 (20)
4TTA4060A	4	943 (37-1/8)	946 (37-1/4)	870 (34-1/4)	7/8	3/8	143 (5-5/8)	83 (3-1-4)	206 (8-1/8)	70 (2-3/4)	508 (20)



Mechanical Specification Options

General

The Outdoor Units are fully charged from the factory for up to 15 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are AHRI certified. The unit is certified to UL 1995. Exterior is designed for outdoor application.

Casing

Unit casing is constructed of heavy gauge, galvanized steel and painted with a weather-resistant powder paint finish on all louvered panels and the fan top panel. The corner panels are prepainted. All panels are subjected to our 1,000 hour salt spray test. The base is made of a CMBP-G30 weatherproof material to resist corrosion.

Refrigerant Controls

Refrigeration system controls include condenser fan, compressor contactor and high pressure switch. High and low pressure controls are inherent to the compressor. A factory supplied liquid line drier is standard. Some models may require field installation.

Compressor

The compressor features internal over temperature, pressure protection and total dipped hermetic motor. Other features include: Centrifugal oil pump and low vibration and noise.

Condenser Coil

The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Low Ambient Cooling

As manufactured, this system has a cooling capacity to 55°F. The addition of an evaporator defrost control permits operation to 40°F. The addition of an evaporator defrost control with TXV permits low ambient cooling to 30°F.

Thermostats—Cooling only and heat/cooling (manual and automatic change over). Sub-base to match thermostat and locking thermostat cover.

Evaporator Defrost Control — See Low Ambient Cooling.



Notes

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Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a global business committed to a world of sustainable progress and enduring results. For more information, visit www.ingersollrand.com.

Ingersoll Rand has a policy of continuous product and product data improvements and reserves the right to change design and specifications without notice.

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22-1928-1B-EN 19 Oct 2016

Supersedes 22-1928-1A-EN (July 2016)





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Number of shipments by month:



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Customs US Trade Data Records

9 Shipments available for TRANE O B. US import data refreshed daily and available back to 2008 with advanced search and filtering

Date	Supplier	Buyer	Details	Country Of Origin	HS Codes	More
2018-06-06	BROAD OCEAN MOTOR HONGKONG CO LTD	TRANE O B	MOTOR P/O NO:30024563 D157746P01/Y7S859D01L 8640PCS D157747P01/Y7S859E01L 2880PCS D159878P01/Y7S859D202 360PCS D159879P01/Y7S859E014 300PCS D159882P01/ZWK702B0006 1800PCS	Hong Kong	Unavailable	View BOL sample

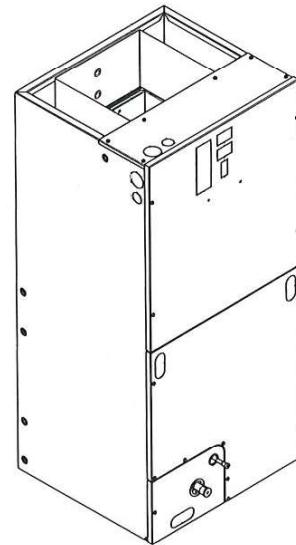
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10/02/2020

Installer's Guide

Convertible Air Handlers 1-1/2 – 5 Ton

TEM4A0B18S21SB
TEM4A0B24S21SB
TEM4A0B30S31SB
TEM4A0B36S31SB
TEM4A0C37S31SB
TEM4A0C42S41SB
TEM4A0C48S41SB
TEM4A0C60S51SB



The TEM4 series air handler is designed for installation in a closet, utility room, alcove, basement, crawlspace or attic. These versatile units are applicable to air conditioning and heat pump applications. Several models are available to meet the specific requirements of the outdoor equipment. Field installed electric resistance heaters are available.

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

March 2018

18-GF73D1-1H-EN

 **Ingersoll Rand.**

⚠ WARNING**SAFETY HAZARD!**

Fiberglass dust and ceramic fibers are believed by the state of California to cause cancer through inhalation. Glasswool fibers may also cause respiratory, skin, or eye irritation.

PRECAUTIONARY MEASURES

- Avoid breathing fiberglass dust
- Use a NIOSH approved dust/mist respirator
- Avoid contact with the skin or eyes. Wear long-sleeved, loose fitting clothing, gloves, and eye protection
- Wash clothes separately from other clothing, rinse washer thoroughly
- Operations such as sawing, blowing, tear-out, and spraying may generate fiber concentrations requiring additional respiratory protection. Use the appropriate NIOSH approved respirator in these situations

FIRST AID MEASURES

- **EYE CONTACT:** FLUSH EYES WITH WATER TO REMOVE DUST. IF SYMPTOMS PERSIST, SEEK MEDICAL ATTENTION.
- **SKIN CONTACT:** WASH AFFECTED AREA GENTLY WITH SOAP AND WARM WATER AFTER HANDLING.

This warning complies with state of California law, Proposition 65.

Note: Air handlers have been evaluated in accordance with the Code of Federal Regulations, Chapter XX, Part 3280 or the equivalent. "SUITABLE FOR MOBILE HOME USE."

Note: Condensation may occur on the surface of the air handler when installed in an unconditioned space. When units are installed in unconditioned spaces, verify that all electrical and refrigerant line penetrations on the air handler are sealed completely.

Note: The manufacturer recommends installing ONLY A.H.R.I approved, matched indoor and outdoor systems. Some of the benefits of installing approved matched indoor and outdoor split systems are maximum efficiency, optimum performance, and the best overall system reliability.

⚠ WARNING**SAFETY HAZARD!**

This appliance is not to be used by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

⚠ WARNING**SAFETY HAZARD!**

Children should be supervised to ensure that they do not play with the appliance.

Important: Installation of this unit shall be made in accordance with the National Electric Code, NFPA No. 90A and 90B, and any other local codes or utilities requirements.

Important: Air handlers do not require repositioning of the coil or drain pan for upflow or horizontal left applications. See the downflow and horizontal right installation sections for application instructions.

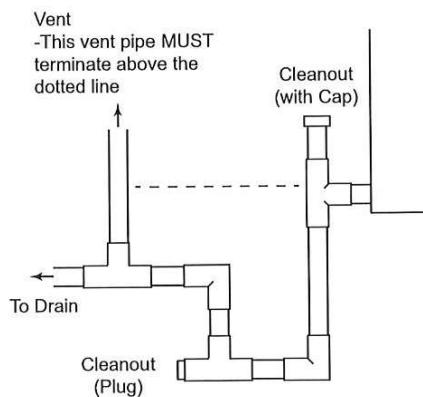
Features

Table 1. Standard Features

- MULTI-POSITION UPFLOW, DOWNGLOW, HORIZONTAL LEFT AND HORIZONTAL RIGHT
- PAINTED FINISH ON GALVANIZED STEEL EXTERIOR WITH FULLY INSULATED CABINET THAT MEETS R4.2 VALUE
- STURDY POLYCARBONATE DRAIN PANS
 - The TEM air handler has factory installed drain pans and is shipped for upflow and horizontal left applications
- 208/230 VAC OPERATION
- MULTI-SPEED DIRECT DRIVE BLOWER.
- FACTORY INSTALLED R-410A THERMAL EXPANSION VALVE
- ALL ALUMINUM COIL
- BOTTOM RETURN
- MEETS THE MINIMUM LEAKAGE REQUIREMENTS FOR THE FLORIDA AND CALIFORNIA BUILDING CODES

Table 2. Optional Accessories

- 4,5,8,10,15, 20 and 25 KW SINGLE PHASE ELECTRIC HEATERS
 - Circuit breakers available on all single phase 4, 5, 8, 10, 15, 20 and 25 KW heaters
 - Lug terminals available on all single phase 4, 5, 8, and 10 KW heaters
- 10 and 15 KW THREE PHASE ELECTRIC HEATERS
 - Heaters available with lug terminals
- SINGLE POINT POWER ENTRY KIT (for 15 and 20 KW Heaters)
- SUPPLY DUCT FLANGE KIT
- DOWNGLOW WATER MANAGEMENT KIT - BAYTEMDFKT1A (required for 5 Ton models)
- DOWNGLOW SUB-BASE KITS - TAYBASE185, TAYBASE235
- R-22 CONVERSION KITS — BAYATXV1836B, BAYATXV4248B, BAYATXV6161B
- SLIM FIT FILTER BOX KIT — BAYSF1185AAA, BAYSF1235AAA



Insulate the primary drain line to prevent sweating where dew point temperatures may be met.
(Insulation is optional depending on climate and application needs.)

5. Refrigerant Piping

Refrigerant piping external to the unit shall be sized in accordance with the instructions of the manufacturer of the outdoor equipment.

6. Metering Device

All units are shipped and installed with an internally-checked, bleed TXV designed for air conditioning or heat pump operation. Pressures equalize after shut down. Some outdoor models may require a start assist kit. See outdoor unit for more information.

7. Blower

This unit is supplied with a multi-speed motor with a direct drive blower wheel which can obtain various air flows. The unit is shipped with factory set cooling and heating speed taps. Airflow performance tables are available for additional speed taps. Disconnect all power to the unit before making any adjustments to the motor speed taps. Be sure to check the air flow and the temperature drop across the evaporator coil to ensure sufficient air flow.

8. Wiring

Consult all schematic and pictorial wiring diagrams of this unit and the outdoor equipment to determine compatibility of wiring connections and to determine specific requirements.

All field wiring to the air handler should be installed in accordance with the latest edition of the National Electric Code NFPA No. 70 and any local codes. Check rating plates on unit for rated volts, minimum circuit ampacity and maximum over current protection. Supply circuit power wiring must be 75 degree C (167 degree F) minimum copper conductors only. Copper supply wires shall be sized to the National Electric Code or local code requirements, whichever is more stringent.

The unit is shipped wired for 230/240 Volt AC 60 HZ 1 Phase Operation. If the unit is to be operated at 208 VAC 60HZ, follow the instructions on the indoor unit wiring diagram to change the low voltage transformer to 208 VAC operation (Ensure unit is properly grounded).

Class 2 low voltage control wiring should not be run in conduit with power wiring and must be separated from power wiring unless class 1 wire with proper voltage rating is used.

Low voltage control wiring should be 18 Awg, color coded (105 degree C minimum). For lengths longer than 100ft., 16 Awg wire should be used. Make certain that separation of control wiring and power wiring has been maintained.

9. Air Filter

To protect the coil, blower and other internal parts from excessive dirt and dust an air filter must be installed before air enters the evaporator coil. A remote filter must be installed. Consult the filter manufacturer for proper sizing and maximum velocity requirements.

10. Thermostat

Select a thermostat that is commonly used with HP or AC single stage heating/cooling with electric heat. The thermostat will energize the fan on a demand for heat or cool.

Install the thermostat on an inside wall, away from drafts, lights or other heat sources in a location that has sufficient air circulation from other rooms being controlled by the thermostat.

11. Sequence of Operation Cooling (Cooling only)

PSC versions - When the thermostat calls for cooling, the circuit from R to G is completed. The blower relay is energized.

Constant torque version - When the thermostat calls for cooling, the circuit from R to G is completed. The blower motor is energized directly by the 24VAC signal from the thermostat.

The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and condenser fan motor.

Cooling (heat pump)

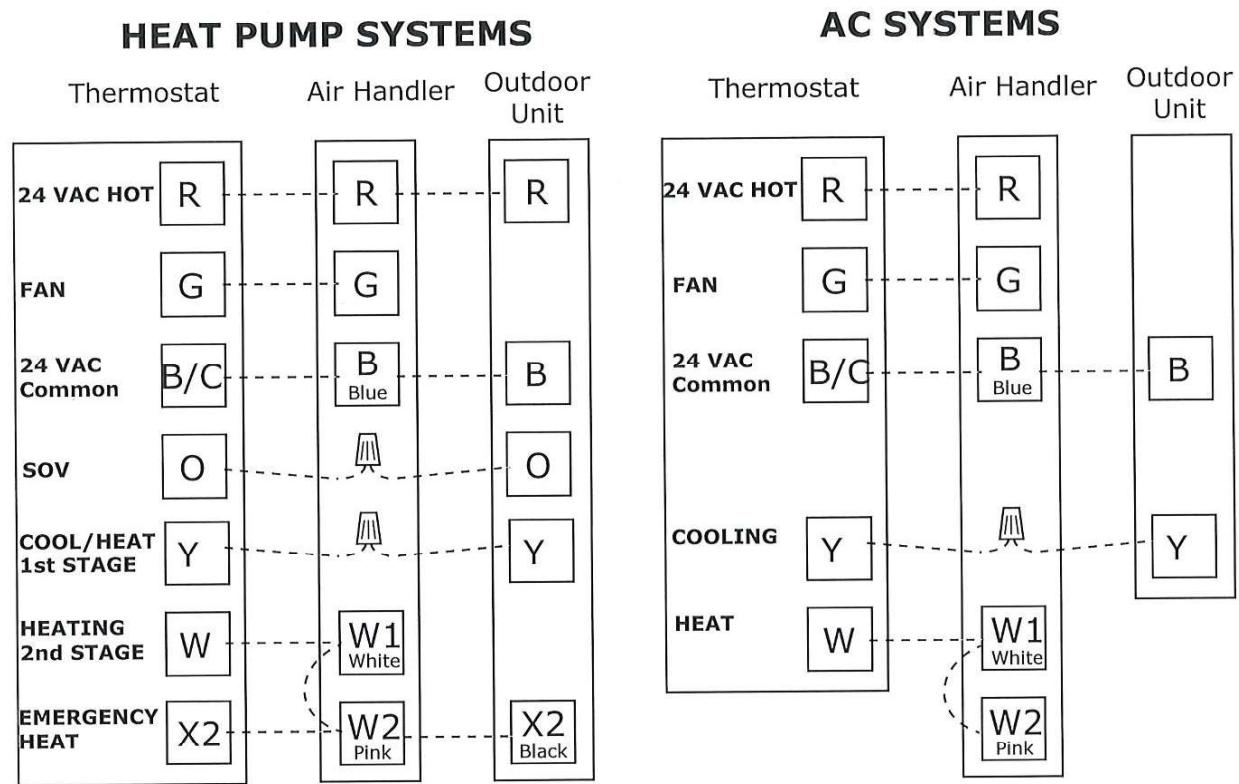
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The circuit from R to Y is also complete energizing the compressor contactor of the outdoor unit. The contactor will close and start the compressor and

Field Wiring

Figure 1. Field Wiring Diagrams



In AC systems for multiple stages of electric heat, jumper W1 and W2 together if comfort control has only one stage of heat.

Performance and Electrical Data

Table 3. Air Flow Performance

TEM4A0B18S21SB, TEM4A0B24S21SB (a)						
EXTERNAL STATIC (in w.g.)	AIRFLOW					
	Speed Taps — 230 VOLTS			Speed Taps — 208 VOLTS		
	High	Med	Low †	High	Med	Low †
0.1	1094	927	773	1052	849	658
0.2	1032	880	735	990	807	624
0.3	955	818	678	915	750	578
0.4	864	739	601	826	679	518
0.5	759	645	505	723	591	441
0.6	639	534	389	606	490	
0.7	505	408		476	374	

1. Values are with wet coil, no filter, and no heaters
 2. CFM Correction for dry coil = Add 3%
 3. † = Factory setting

(a) For the TEM4A0B24S21SB, the recommended speed tap is medium at 0.4" external static pressure.

Table 4. Electrical Data

TEM4A0B18S21SB, TEM4A0B24S21SB											
Heater Model No.	No. of Circuits/ Phases	240 Volt					208 Volt				
		Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection
		kW	BTUH				kW	BTUH			
No Heater				1.2 *	2	15			1.2 *	2	15
BAYHTR1504BRK BAYHTR1504LUG	1/1	3.84	13100	16.0	22	25	2.88	9800	13.8	19	20
BAYHTR1505BRK BAYHTR1505LUG	1/1	4.80	16400	20.0	27	30	3.60	12300	17.3	23	25
BAYHTR1508BRK BAYHTR1508LUG	1/1	7.68	26200	32.0	42	45	5.76	19700	27.7	36	40
BAYHTR1510BRK BAYHTR1510LUG	1/1	9.60	32800	40.0	52	60	7.20	24600	34.6	45	45
BAYHTR3510LUG	1/3	9.60	32800	23.1	30	30	7.20	24600	20.0	26	30

* = Motor Amps

Table 7. Air Flow Performance

EXTERNAL STATIC (in w.g.)	TEM4A0C37S31SB					
	AIRFLOW			Speed Taps — 208 VOLTS		
	High	Med	Low †	High	Med	Low †
0.1	1959	1704	1344	1786	1465	1154
0.2	1898	1675	1332	1748	1462	1126
0.3	1828	1631	1325	1697	1444	1108
0.4	1750	1574	1310	1633	1410	1095
0.5	1662	1504	1277	1557	1359	1076
0.6	1563	1420	1223	1468	1289	1039
0.7	1452	1321		1365		

1. Values are with wet coil, no filter, and no heaters
 2. CFM Correction for dry coil = Add 3%
 3. † = Factory setting
 4. The recommended speed tap is low at 0.5" external static pressure.
 5. In downflow applications, airflow must not exceed 1600 cfm due to condensate blowoff.

Table 8. Electrical Data

Heater Model No.	No. of Circuits/Phases	TEM4A0C37S31SB						208 Volt			
		240 Volt		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	Capacity		Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection
		kW	BTUH				kW	BTUH			
No Heater				2.5 *	3	15			2.5 *	3	15
BAYHTR1504BRK BAYHTR1504LUG	1/1	3.84	13100	16.0	23	25	2.88	9800	13.8	20	20
BAYHTR1505BRK BAYHTR1505LUG	1/1	4.8	16400	20.0	28	30	3.6	12300	17.3	25	25
BAYHTR1508BRK BAYHTR1508LUG	1/1	7.68	26200	32.0	43	45	5.76	19700	27.7	38	40
BAYHTR1510BRK BAYHTR1510LUG	1/1	9.6	32800	40.0	53	60	7.2	24600	34.6	46	50
BAYHTR1517BRK-Circuit 1 (a)	2/1	9.6	32800	40.0	53	60	7.2	24600	34.6	46	50
BAYHTR1517BRK-Circuit 2		4.8	16400	20.0	25	25	3.6	12300	17.3	22	25
BAYHTR1523BRK-Circuit 1 (a)	2/1	9.6	32800	40.0	53	60	7.2	24600	34.6	46	50
BAYHTR1523BRK-Circuit 2		9.6	32800	40.0	50	50	7.2	24600	34.6	43	45
BAYHTR3510LUG	1/3	9.6	32800	23.1	32	35	7.2	24600	20.0	28	30
BAYHTR3517LUG	1/3	14.4	49100	34.6	46	50	10.8	36900	30.0	40	40

* = Motor Amps

(a) MCA and MOP for circuit 1 contains the motor amps

Performance and Electrical Data

Table 13. Air Flow Performance

EXTERNAL STATIC (in w.g.)		TEM4A0C60S51SB			
		AIRFLOW			
		Speed Taps — 208 – 230 VOLTS			
		High		Med †	
0.1		1954		1864	1780
0.2		1919		1827	1741
0.3		1885		1791	1704
0.4		1852		1756	1668
0.5		1821		1723	1633
0.6		1790		1691	1599
0.7		1761		1660	1567

1. Values are with wet coil, no filter, and no heaters
 2. CFM Correction for dry coil = Add 3%
 3. † = Factory Setting
 4. Low = Taps 1–3, Med = Tap 4, High = Tap 5
 5. BAYTEMDFKT1A must be used for downflow applications and airflow must not exceed 1800 cfm.

Table 14. Electrical Data

Heater Model No.		TEM4A0C60S51SB									
		240 Volt				208 Volt					
		No. of Circuits/Phases	Capacity	Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	Capacity	Heater Amps per Circuit	Minimum Circuit Ampacity	Maximum Overload Protection	
No Heater			kW	BTUH							
BAYHTR1504BRK BAYHTR1504LUG	1/1	3.84	1310-0	16.0	28	30	2.88	9800	13.8	25	25
BAYHTR1505BRK BAYHTR1505LUG	1/1	4.8	1640-0	20.0	33	35	3.6	12300	17.3	29	30
BAYHTR1508BRK BAYHTR1508LUG	1/1	7.68	2620-0	32.0	48	50	5.76	19700	27.7	42	45
BAYHTR1510BRK BAYHTR1510LUG	1/1	9.6	3280-0	40.0	58	60	7.2	24600	34.6	51	60
BAYHTR1517BRK-Circuit 1 (a)	2/1	9.6	3280-0	40.0	58	60	7.2	24600	34.6	51	60
BAYHTR1517BRK-Circuit 2		4.8	1640-0	20.0	25	25	3.6	12300	17.3	22	25
BAYHTR1523BRK-Circuit 1 (a)	2/1	9.6	3280-0	40.0	58	60	7.2	24600	34.6	51	60
BAYHTR1523BRK-Circuit 2		9.6	3280-0	40.0	50	50	7.2	24600	34.6	43	45
BAYHTR1525BRK-Circuit 1 (a)	4/1	6.0	2050-0	25.0	39	40	4.5	15400	21.6	35	35
BAYHTR1525BRK-Circuit 2		6.0	2050-0	25.0	31	35	4.5	15400	21.6	27	30
BAYHTR1525BRK-Circuit 3		6.0	2050-0	25.0	31	35	4.5	15400	21.6	27	30
BAYHTR1525BRK-Circuit 4		6.0	2050-0	25.0	31	35	4.5	15400	21.6	27	30
BAYHTR3510LUG	1/3	9.6	3280-0	23.1	36	40	7.2	24600	20.0	32	35
BAYHTR3517LUG	1/3	14.4	4910-0	34.6	50	50	10.8	36900	30.0	44	45

* = Motor Amps

(a) MCA and MOP for circuit 1 contains the motor amps.

Minimum Airflow CFM

TEM4A0B18S21SB, TEM4A0B24S21SB		
Heater	Minimum Heat Speed Tap	
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	With Heat Pump	Without Heat Pump
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Med	Low
BAYHTR3510LUG	Med	Low

TEM4A0B30S31SB, TEM4A0B36S31SB		
Heater	Minimum Heat Speed Tap	
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	With Heat Pump	Without Heat Pump
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Low	Low
BAYHTR1510BRK	Low	Low
BAYHTR1517BRK	Med	Low
BAYHTR3517LUG	High	Low

TEM4A0C37S31SB		
Heater	Minimum Heat Speed Tap	
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	With Heat Pump	Without Heat Pump
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Low	Low
BAYHTR1517BRK	Low	Low
BAYHTR1523BRK	High	High
BAYHTR3517LUG	Low	Low

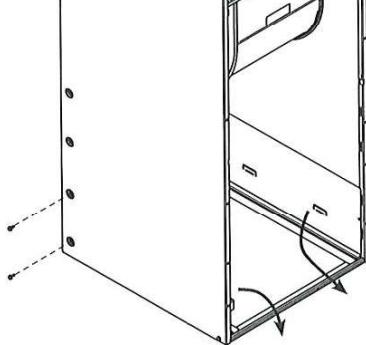
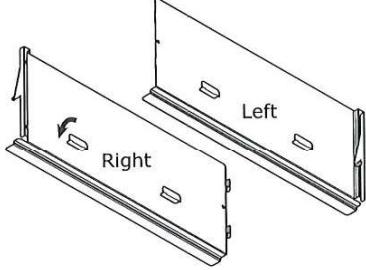
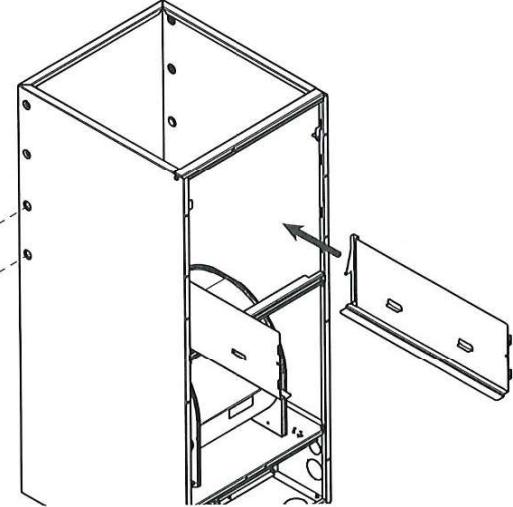
TEM4A0C42S41SB		
Heater	Minimum Heat Speed Tap	
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	With Heat Pump	Without Heat Pump
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Low	Low
BAYHTR1517BRK	Low	Low
BAYHTR1523BRK	Med	Low
BAYHTR3517LUG	Low	Low

TEM4A0C48S41SB, TEM4A0C60S51SB		
Heater	Minimum Heat Speed Tap	
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	With Heat Pump	Without Heat Pump
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Low	Low
BAYHTR1517BRK	Low	Low
BAYHTR1523BRK	Med-Low	Med-Low
BAYHTR1525BRK	Med	Med-Low
BAYHTR3517LUG	Low	Low

Heater Pressure Drop Table TEM Air Handler Models

Airflow CFM	Number of Racks				Heater Racks
	1	2	3	4	
	Air Pressure Drop — Inches W.G.				
1800	0.02	0.04	0.06	0.14	
1700	0.02	0.04	0.06	0.14	BAYHTR1504
1600	0.02	0.04	0.06	0.13	BAYHTR1505
1500	0.02	0.04	0.06	0.12	BAYHTR1508
1400	0.02	0.04	0.06	0.12	BAYHTR1510
1300	0.02	0.04	0.05	0.11	BAYHTR3510
1200	0.01	0.04	0.05	0.10	BAYHTR1515
1100	0.01	0.03	0.05	0.09	BAYHTR1517
1000	0.01	0.03	0.04	0.09	BAYHTR3515
900	0.01	0.03	0.04	0.08	BAYHTR3517
800	0.01	0.03			BAYHTR1519
700	0.01	0.02			BAYHTR1520
600	0.01	0.02			BAYHTR1521
					BAYHTR1523
					BAYHTR1525

Table 15. Downflow (continued)

<p>5. On both sides of the cabinet, remove the two screws that hold the coil support brackets. Seal the holes to prevent air leakage.</p> <p>6. Rotate and lift the two coil support brackets to remove from front slots in cabinet.</p>	 <p>Figure 6. All models</p>
<p>7. Bend the two tabs on each of the coil support brackets. Tabs should be bent inward so they are parallel to the bottom flange.</p>	 <p>Figure 7. All models</p>
<p>8. Rotate the unit into the downflow orientation.</p> <p>9. Pre-drill four clearance holes in the cabinet at dimples located below the location the screws were removed for the coil support brackets. There are two holes per side. See location of holes</p> <p>10. Replace the center horizontal bracket using the screws removed in a previous step.</p> <p>11. Place coil support brackets into the lower set of slots and rotate into place. Push downward to lock into place.</p> <p>12. Secure each bracket with 2 screws that were previously removed.</p>	 <p>Figure 8. All models</p>

Coil Conversion

Table 16. Horizontal Right

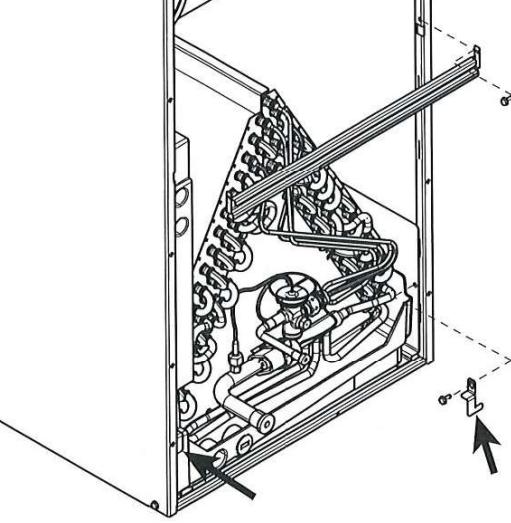
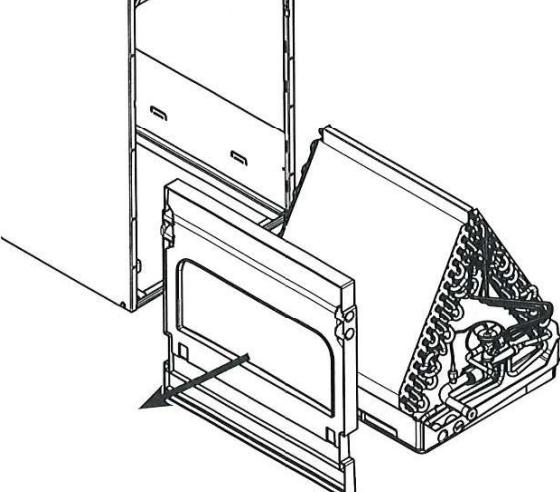
<p>Follow the conversion steps when installing the air handler in horizontal right configuration.</p> <ol style="list-style-type: none"> 1. Remove the front panels from the air handler. The coil and line set panel do not need to be separated. 2. Remove the two coil retaining brackets located at the front of the drain pan. Each is held in place by one screw. Save brackets and screws. Figure 11, p. 23 3. Remove the two screws holding the center horizontal brace and rotate out of place. Retain parts. Figure 11, p. 23 	 <p>Figure 11.</p>
<ol style="list-style-type: none"> 4. Make note of the horizontal drain pan orientation (up/down). 5. Slide the coil assembly out. 6. Change location of the water diverter bracket by removing the screws on the water diverter bracket that is located on the left side of the coil. Attach the water diverter to the right hand side of the coil using the same screws. <p>Important: The coil slabs are different and the mount hole locations will vary. See the illustrations on the following pages that correspond to the unit tonnage to see the correct mounting position of the water diverter bracket.</p> <p>Important: The water diverter brackets are not symmetrical and will vary by tonnage.</p>	 <p>Figure 12. All other models</p>

Table 16. Horizontal Right (continued)

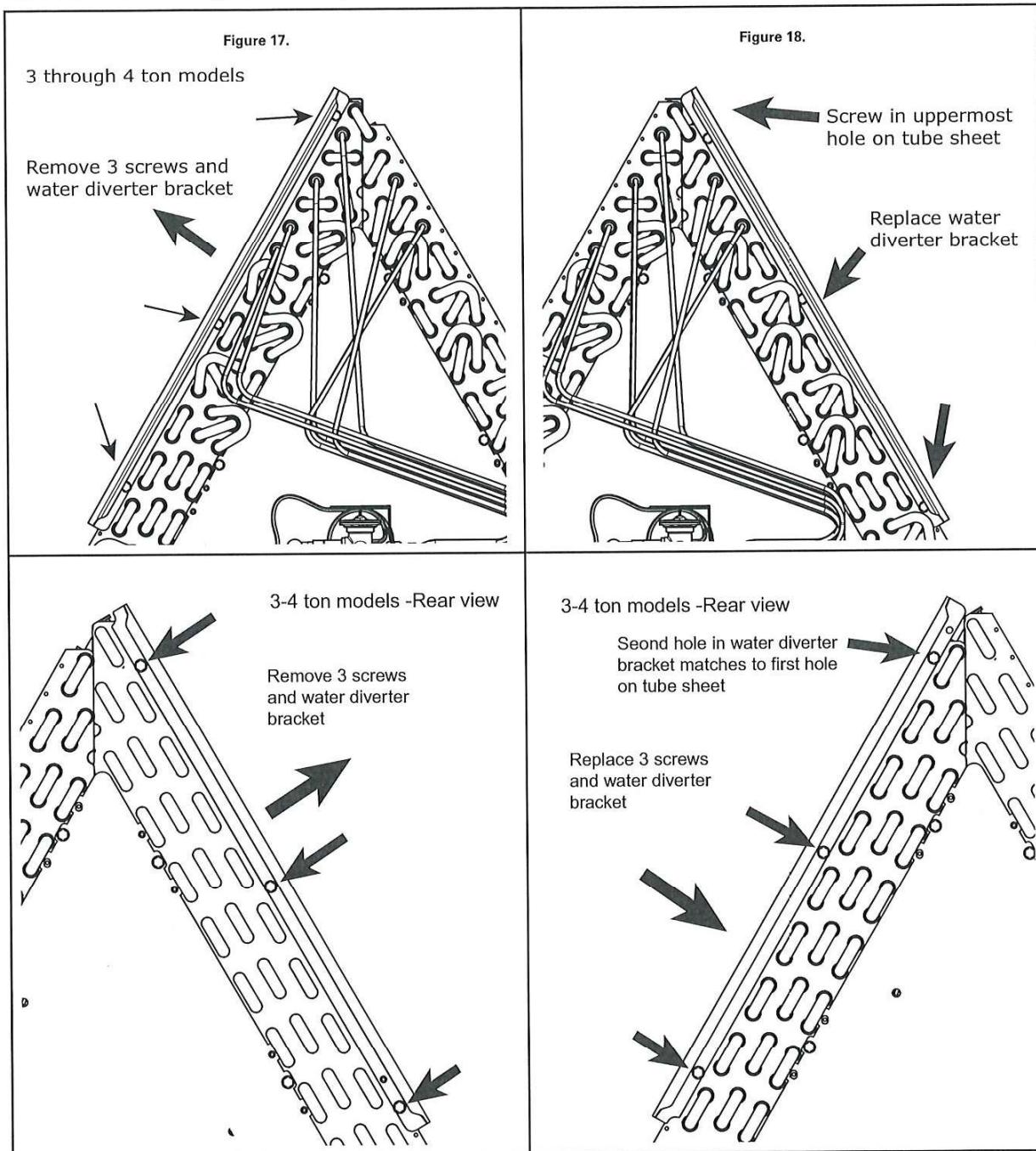
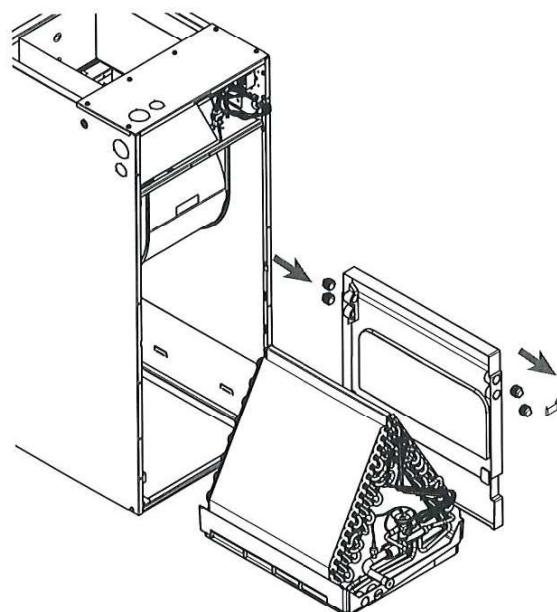
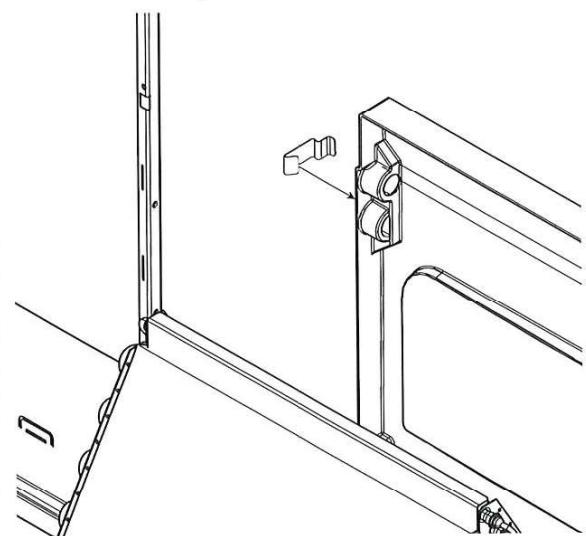


Table 16. Horizontal Right (continued)

7. Relocate the horizontal drain pan from the left side of the coil to the right side.
8. Remove the drain pan support bracket. Do not discard. Remove the two drain plugs from the front of the drain pan and insert them in the drains at the rear of the drain pan. Figure 23, p. 27

Figure 23. All other models

9. Reinstall the drain pan support bracket. The bracket should be located between the two drain plugs as shown in Figure 24, p. 27

Figure 24. All other models

Checkout Procedures

The final phase of the installation is the system Checkout Procedures. The following list represents the most common items covered in a Checkout Procedure. Confirm all requirements in this document have been met.

<ul style="list-style-type: none"><input type="checkbox"/> All wiring connections are tight and properly secured.<input type="checkbox"/> Voltage and running current are within limits.<input type="checkbox"/> All refrigerant lines (internal and external to equipment) are isolated, secure, and not in direct contact with each other or structure.<input type="checkbox"/> All braze connections have been checked for leaks. A vacuum of 350 microns provides confirmation that the refrigeration system is leak free and dry.<input type="checkbox"/> Final unit inspection to confirm factory tubing has not shifted during shipment. Adjust tubing if necessary so tubes do not rub against each other or any component when unit runs.<input type="checkbox"/> Ductwork is sealed and insulated.<input type="checkbox"/> All drain lines are clear with joints properly sealed. Pour water into drain pan to confirm proper drainage. Provide enough water to ensure drain trap is primed.	<ul style="list-style-type: none"><input type="checkbox"/> Supply registers and return grilles are open, unobstructed, and air filter is installed.<input type="checkbox"/> Indoor blower and outdoor fan are operating smoothly and without obstruction.<input type="checkbox"/> Indoor blower motor set on correct speed setting to deliver required CFM. "Blower and fan set screws are tight."<input type="checkbox"/> Cover panels are in place and properly tightened.<input type="checkbox"/> For gas heating systems, manifold pressure has been checked and all gas line connections are tight and leak free.<input type="checkbox"/> For gas heating systems, flue gas is properly vented.<input type="checkbox"/> System functions safely and properly in all modes.<input type="checkbox"/> Owner has been instructed on use of system and given manual.
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