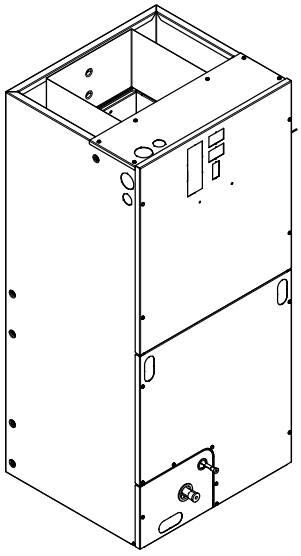
Submittal

3.0 Ton
Convertible Air Handler
A4AH4P37A1C30A



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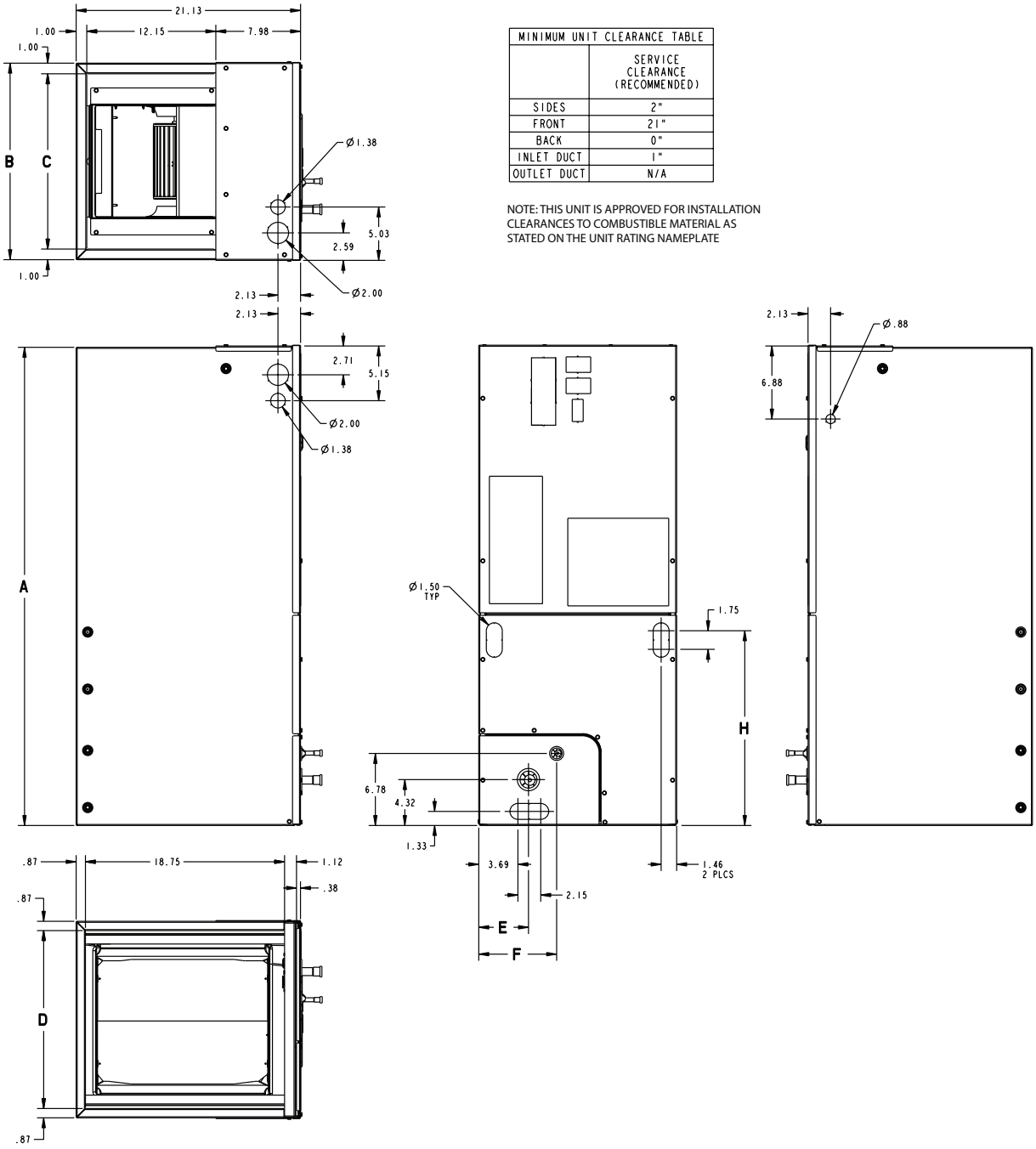
⚠ SAFETY WARNING

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.

October 2019 **A4AH4P37A1C-SUB-1A-EN**

Ingersoll Rand

Outline Drawing



MINIMUM UNIT CLEARANCE TABLE	
	SERVICE CLEARANCE (RECOMMENDED)
SIDES	2"
FRONT	21"
BACK	0"
INLET DUCT	1"
OUTLET DUCT	N/A

NOTE: THIS UNIT IS APPROVED FOR INSTALLATION CLEARANCES TO COMBUSTIBLE MATERIAL AS STATED ON THE UNIT RATING NAMEPLATE

PRODUCT DIMENSIONS									
Air Handler Model	A	B	C	D	E	F	H	Flow Control	Gas Line Braze
A4AH4P37	51.27	23.50	21.50	21.75	7.01	9.66	24.59	TXV	7/8
All dimensions are in inches									

Product Specifications

MODEL	A4AH4P37A1C30A
RATED VOLTS/PH/HZ	208-230/1/60
RATINGS[a]	See O.D. Specifications
INDOOR COIL — Type	Plate Fin
Rows — F.P.I.	3 - 14
Face Area (sq. ft.)	5.50
Tube Size (in.)	3/8
Refrigerant Control	TXV
Drain Conn. Size (in.)[b]	3/4 NPT
DUCT CONNECTIONS	**See Outline Drawing**
INDOOR FAN — Type	Centrifugal
Diameter-Width (In.)	11 X 8
No. Used	1
Drive - No. Speeds	Direct - 3
CFM vs. in. w.g.	See Fan Performance Table
No. Motors — H.P.	1 - 1/3
Motor Speed R.P.M.	825
Volts/Ph/Hz	208-230/1/60
F.L. Amps	2.5
FILTER	
Filter Furnished? [c]	No
REFRIGERANT	**R-410A**
Ref. Line Connections	Brazed
Coupling or Conn. Size — in. Gas	7/8
Coupling or Conn. Size — in. Liq.	3/8
DIMENSIONS	H x W x D
Crated (In.)	52–1/2 x 26 x 24
Uncrated	51-3/8 x 23-1/2 x 21-1/8
WEIGHT	
Shipping (Lbs.) / Net (Lbs.)	145/138

[a] These Air Handlers are A.H.R.I certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240). Refer to the Split System Outdoor Unit Product Data Guides for performance data.
[b] 3/4" Male Plastic Pipe (Ref: ASTM 1785–76)
[c] Remote filter required.

Minimum Airflow CFM

A4AH4P37A1C30A		
Heater	**Minimum Heat Speed Tap**	
	With Heat Pump	Without Heat Pump
BAYHTR1504BRK, BAYHTR1504LUG, BAYHTR1505BRK, BAYHTR1505LUG	Low	Low
BAYHTR1508BRK, BAYHTR1508LUG, BAYHTR1510BRK, BAYHTR1510LUG, BAYHTR3510LUG	Low	Low
BAYHTR1517BRK	Low	Low
BAYHTR1523BRK	High	High
BAYHTR3517LUG	Low	Low

Fixed Orifice Superheat Charging Table

	Indoor Wet Bulb Temp (F)																														
Outdoor Dry Bulb Temperature (F)		50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78
	55	7	9	10	11	12	14	15	17	18	20	21	23	24	26	27	29	30												
	60	5	7	8	9	10	12	13	15	16	18	19	21	22	24	25	27	28	30	31										
	65			4	6	8	10	11	13	14	16	17	18	19	21	22	24	25	27	28	27	31								
	70					5	7	8	10	11	13	14	16	17	18	19	21	22	24	25	27	28	30	31						
	75							5	6	7	9	10	12	14	16	18	19	21	22	24	26	28	29	31	32					
	80									4	6	7	9	10	11	12	14	16	18	19	21	23	25	26	28	29	31	33		
	85											4	6	7	9	10	13	14	16	18	20	21	23	24	26	28	29	30	31	32
	90													4	6	8	10	11	13	14	16	18	20	22	24	25	27	28	30	31
	95															4	6	8	10	13	14	16	18	20	22	23	25	26	28	29
	100																	6	8	10	12	13	16	18	20	21	23	25	27	29
	105																	4	6	7	9	11	13	15	18	20	22	24	26	28
	110																			4	7	9	11	13	16	18	21	23	26	28
	115																					6	9	12	14	16	19	21	24	26

Using a digital psychrometer, measure the return air wet-bulb temperature at the unit just before the coil. Also measure the outdoor dry-bulb temperature. Use these temperatures to locate the target superheat on the charging table. Do not attempt to charge the system if these conditions fall outside of this charging table.
ADD refrigerant to DECREASE total superheat. REMOVE refrigerant to INCREASE total superheat. Always allow 10 to 15 minutes of operation after any refrigerant or air flow change prior to determining the final superheat.

Heater Pressure Drop Table
A4AH4 Air Handler Models

Airflow CFM	Number of Racks					Heater Racks	
	1	2	3	4		Heater Model	No. of Racks
	Air Pressure Drop — Inches W.G.					BAYHTR1504	1
1800	0.02	0.04	0.06	0.14		BAYHTR1505	1
1700	0.02	0.04	0.06	0.14		BAYHTR1508	2
1600	0.02	0.04	0.06	0.13		BAYHTR1510	2
1500	0.02	0.04	0.06	0.12		BAYHTR3510	3
1400	0.02	0.04	0.06	0.12		BAYHTR1517	3
1300	0.02	0.04	0.05	0.11		BAYHTR3517	3
1200	0.01	0.04	0.05	0.10		BAYHTR1523	4
1100	0.01	0.03	0.05	0.09		BAYHTR1525	4
1000	0.01	0.03	0.04	0.09			
900	0.01	0.03	0.04	0.08			
800	0.01	0.03					
700	0.01	0.02					
600	0.01	0.02					

Performance and Electrical Data

1. See Product Data or Air Handler nameplate for approved combinations of Air Handlers and Heaters.
2. Heater model numbers may have additional suffix digits.

Table 1. Air Flow Performance

A4AH4P37A1C30A[a]						
EXTERNAL STATIC (in w.g)	AIRFLOW					
	Speed Taps — 230 VOLTS			Speed Taps — 208 VOLTS		
	High	**Med**	**Low †**	**High**	**Med**	**Low †**
0.1	1723	1356	1254	1651	1211	1129
0.2	1682	1340	1259	1631	1216	1123
0.3	1605	1291	1228	1572	1188	1096
0.4	1492	1211	1162	1474	1127	1047
0.5	1343	1100	1059	1336	1032	977
0.6	1158	957	919	1159	905	886
0.7	998	782		942	744	

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 A4AH4P37A1C30A in downflow applications, airflow must not exceed 1600 cfm due to condensate blow off.

Table 2. Electrical Data

A4AH4P37A1C30A											
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				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
BAYHTR1517BRK with single circuit power source kit BAYSPEKT201A	1/1	14.4	49200	60.0	83	90	10.8	36900	51.9	73	80
BAYHTR1523BRK with single circuit power source kit BAYSPEKT201A	1/1	19.2	65600	80.0	108	110	14.4	49200	69.2	94	100
* = Motor Amps											

[a] MCA and MOP for circuit 1 contains the motor amps

Features and Benefits

- Galvanized metal cabinet with captured foil face insulation
- 2% or less air leakage
- R-4.2 Insulating Value
- Multi-Position UP/Down Flow, Horizontal Left /Right
- ALL Aluminum Coil with Enhanced Patented Coil Fin
- Electric Heaters with polarized plug connections (sold as accessory)
- R-410A Thermal Expansion Valve
- ECM Motor ***(3.5 – 5 Ton Models)***
- Low Voltage Pigtail Connections
- Draw Through Design
- Horizontal Drain pan
- Fused 24V Power
- **5 year warranty**
- **Optional extended warranty available**

Important: *Condensate management kit is required for all 5 ton air handler models installed in downflow applications.*

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Supersedes (New)

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