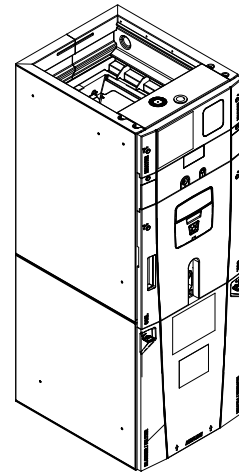


# Submittal

## Variable Speed Convertible Air Handler 3 Ton

TAM9A0C36V31DA



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

*Note: For use with BAYEA series heaters ONLY*

TAG: \_\_\_\_\_

### ▲ SAFETY WARNING

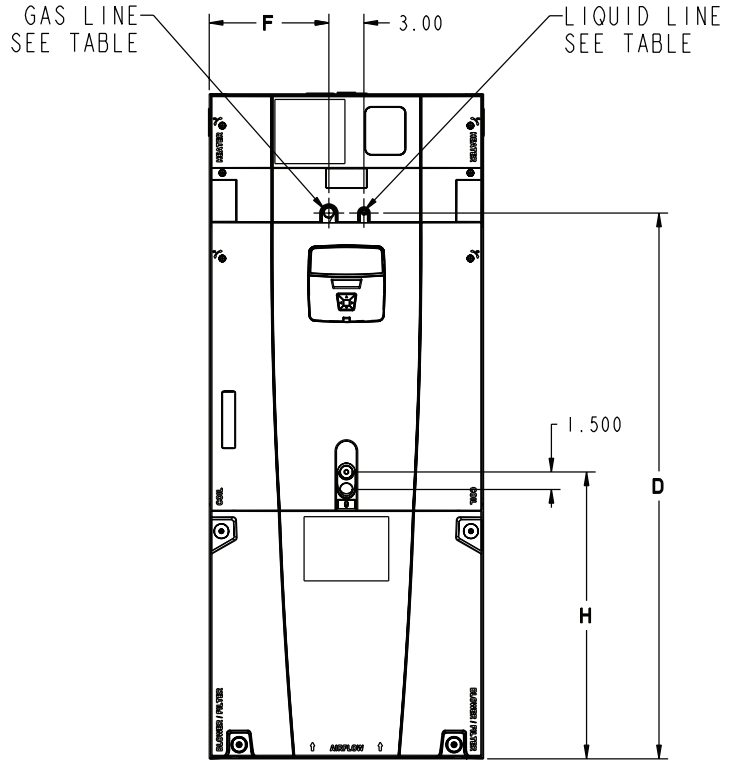
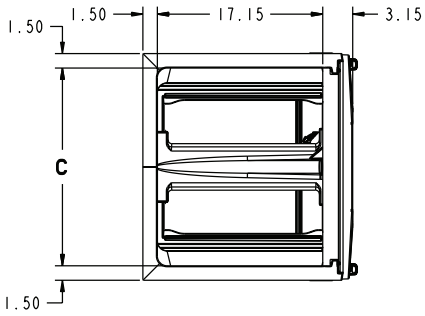
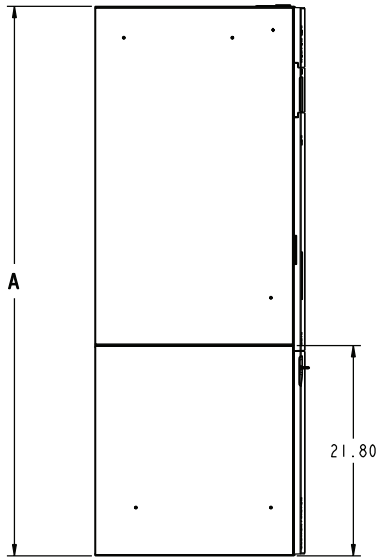
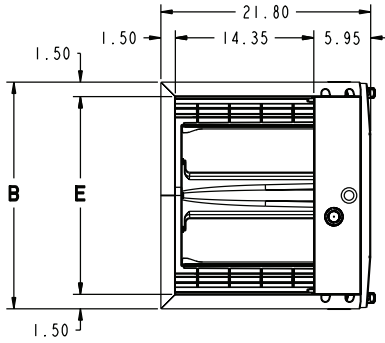
Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified 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 2017

TAM9A0C36-SUB-1A-EN

 Ingersoll Rand.

# TAM9 OUTLINE DRAWING



| MINIMUM UNIT CLEARANCE TABLE |                                 |
|------------------------------|---------------------------------|
|                              | SERVICE CLEARANCE (RECOMMENDED) |
| SIDES                        | 2"                              |
| FRONT                        | 21"                             |
| BACK                         | 0"                              |
| INLET DUCT                   |                                 |
| OUTLET DUCT                  |                                 |

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

| Model Number   | A    | B    | C    | D    | E    | F    | H    | FLOW CONTROL | GAS LINE BRAZE | LIQ LINE BRAZE |
|----------------|------|------|------|------|------|------|------|--------------|----------------|----------------|
| TAM9A0C36H31DA | 56.9 | 46.7 | 20.5 | 23.5 | 20.5 | 10.3 | 24.2 | EEV          | 7/8            | 3/8            |

# PRODUCT SPECIFICATIONS

|                                       |                           |   |                     |
|---------------------------------------|---------------------------|---|---------------------|
| <b>MODEL</b>                          | <b>TAM9A0C36V31DA</b>     | F.L. Amps   | 3.0 — 3.5           |
| <b>RATED VOLTS/PH/HZ.</b>             | 200 — 230/1/60            | <b>FILTER</b>   |                     |
| <b>RATINGS</b> <sup>(a)</sup>         | See O.D. Specifications   | Filter Furnished?   | No                  |
| <b>INDOOR COIL — Type</b>             | Plate Fin                 | Type Recommended  | Throwaway           |
| Rows — F.P.I.                         | 3 — 14                    | No.-Size-Thickness  | 1 — 22 x 20 — 1 in. |
| Face Area (sq. ft.)                   | 5.50                      | <b>REFRIGERANT</b>  | <b>R-410A</b>       |
| Tube Size (in.)                       | 3/8                       | Ref. Line Connections   | Brazed              |
| Refrigerant Control                   | EEV                       | Coupling or Conn. Size-in. Gas  | 7/8                 |
| Drain Conn. Size (in.) <sup>(b)</sup> | 3/4 NPT                   | Coupling or Conn. Size-in. Liq.   | 3/8                 |
| <b>DUCT CONNECTIONS</b>               | See Outline Drawing       | <b>DIMENSIONS</b>   | H x W x D           |
| <b>INDOOR FAN — Type</b>              | Centrifugal               | Crated (In.)  | 58 x 25.5 x 24.5    |
| Diameter-Width (In.)                  | 11 x 10                   | Uncrated  | 56.9 x 23.5 x 21.8  |
| No. Used                              | 1                         | <b>WEIGHT</b>   |                     |
| Drive — No. Speeds                    | Direct — Variable         | Shipping (Lbs.)/Net (Lbs.)  | 157/146             |
| CFM vs. in. w.g.                      | See Fan Performance Table | <sup>(a)</sup> These Air Handlers are AHRI certified with various Split System Air Conditioners and Heat Pumps (AHRI STANDARD 210/240). |                     |
| No. Motors — H.P.                     | 1 — 1/2                   | <sup>(b)</sup> 3/4" Male Plastic Pipe (Ref.:ASTM 1785-76)   |                     |
| Motor Speed RPM                       | Variable ECM              |   |                     |
| Volts/Ph/Hz                           | 208-230/1/60              |   |                     |

## HEATER ATTRIBUTE DATA

| TAM9A0C36V31DA                          |                 |          |       |                         |                          |                             |          |       |                         |                          |                             |
|---|-----------------|----------|-------|-------------------------|--------------------------|-----------------------------|----------|-------|-------------------------|--------------------------|-----------------------------|
| Heater Model No.                        | No. of Circuits | 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                               | 0               | -        | -     | 3.5 **                  | 4                        | 15                          | -        | -     | 3.5 **                  | 4                        | 15                          |
| BAYEAAC04++1                            | 1               | 3.84     | 13100 | 16.0                    | 24                       | 25                          | 2.88     | 9800  | 13.8                    | 22                       | 25                          |
| BAYEAAC05++1                            | 1               | 4.80     | 16400 | 20.0                    | 29                       | 30                          | 3.60     | 12300 | 17.3                    | 26                       | 30                          |
| BAYEAAC08++1                            | 1               | 7.68     | 26200 | 32.0                    | 44                       | 45                          | 5.76     | 19700 | 27.7                    | 39                       | 40                          |
| BAYEAAC10++1                            | 1               | 9.60     | 32800 | 40.0                    | 54                       | 60                          | 7.20     | 24600 | 34.6                    | 48                       | 50                          |
| BAYEAAC10LG3                            | 1-3 PH          | 9.60     | 32800 | 23.1                    | 33                       | 35                          | 7.20     | 24600 | 20.0                    | 29                       | 30                          |
| BAYEABC15LG3                            | 1-3 PH          | 14.40    | 42000 | 34.6                    | 47                       | 50                          | 10.80    | 36900 | 30.0                    | 41                       | 45                          |
| BAYEABC15BK1 - Circuit 1 <sup>(a)</sup> | 2               | 9.60     | 32800 | 40.0                    | 54                       | 60                          | 7.20     | 24600 | 34.6                    | 48                       | 50                          |
| BAYEABC15BK1 - Circuit 2                |                 | 4.80     | 16400 | 20.0                    | 25                       | 25                          | 3.60     | 12300 | 17.3                    | 22                       | 25                          |
| BAYEABC20BK1 - Circuit 1 <sup>(a)</sup> | 2               | 9.60     | 32800 | 40.0                    | 54                       | 60                          | 7.20     | 24600 | 34.6                    | 48                       | 50                          |
| BAYEABC20BK1 - Circuit 2                |                 | 9.60     | 32800 | 40.0                    | 50                       | 50                          | 7.20     | 24600 | 34.6                    | 43                       | 45                          |

Note: \*\* Motor Amps

<sup>(a)</sup> MCA and MOP for circuit 1 contains the motor amps

**Note:** See Product Data or Air Handler nameplate for approved combinations of Air Handlers and Heaters.

**Note:** Heater model numbers may have additional suffix digits.

# TAM9 Air Flow Performance Tables

| TAM9A0C36 AIRFLOW PERFORMANCE CONSTANT CFM MODE / CONSTANT TORQUE MODE |                         |               |   |                          |                          |                          |                          |                         |               |                          |                   |                   |                    |     |
|--|-------------------------|---------------|---|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------|---------------|--------------------------|-------------------|-------------------|--------------------|-----|
| OUTDOOR MULTIPLIER (TONS)  | COOLING AIRFLOW SETTING | AIRFLOW POWER | EXTERNAL STATIC PRESSURE (Constant CFM / Constant Torque) |                          |                          |                          |                          | HEATING AIRFLOW SETTING | AIRFLOW POWER | EXTERNAL STATIC PRESSURE |                   |                   |                    |     |
|  |                         |               | 0.1   | 0.3                      | 0.5                      | 0.7                      | 0.9                      |                         |               | 0.1                      | 0.3               | 0.5               | 0.7                | 0.9 |
| 2 tons   | 290 CFM/ton             | CFM Watts     | 605 / 747<br>31 / 48                                      | 573 / 565<br>59 / 58     | 553 / 306<br>88 / 62     | 548 / NA<br>120 / NA     | 546 / NA<br>153 / NA     | 290 CFM/ton             | CFM Watts     | 606<br>574<br>587        | 574<br>57<br>119  | 551<br>87<br>119  | 549<br>152         |     |
|  | 370 CFM/ton             | CFM Watts     | 755 / 880<br>50 / 70                                      | 745 / 738<br>85 / 85     | 737 / 575<br>121 / 93    | 738 / 367<br>160 / 97    | 735 / NA<br>197 / NA     | 350 CFM/ton             | CFM Watts     | 720<br>705<br>77         | 705<br>805<br>111 | 695<br>803<br>148 | 691<br>184         |     |
|  | 400 CFM/ton             | CFM Watts     | 810 / 929<br>58 / 80                                      | 804 / 797<br>97 / 96     | 800 / 650<br>136 / 106   | 802 / 478<br>176 / 111   | 802 / 231<br>216 / 120   | 400 CFM/ton             | CFM Watts     | 810<br>810<br>56         | 805<br>95<br>134  | 800<br>134<br>174 | 802<br>214         |     |
|  | 450 CFM/ton             | CFM Watts     | 900 / 1011<br>75 / 98                                     | 900 / 893<br>118 / 117   | 902 / 764<br>162 / 129   | 905 / 624<br>207 / 136   | 906 / 462<br>251 / 140   | 450 CFM/ton             | CFM Watts     | 900<br>900<br>72         | 900<br>115<br>159 | 903<br>204<br>204 | 907<br>248         |     |
|  | 290 CFM/ton             | CFM Watts     | 742 / 891<br>48 / 72                                      | 729 / 752<br>82 / 87     | 722 / 592<br>118 / 96    | 721 / 394<br>155 / 99    | 720 / NA<br>193 / NA     | 290 CFM/ton             | CFM Watts     | 742<br>46                | 731<br>81         | 722<br>117        | 720<br>154<br>191  |     |
| 2.5 tons   | 370 CFM/ton             | CFM Watts     | 922 / 1055<br>80 / 109                                    | 923 / 942<br>124 / 128   | 927 / 820<br>170 / 142   | 930 / 690<br>215 / 150   | 931 / 546<br>260 / 154   | 350 CFM/ton             | CFM Watts     | 877<br>68                | 877<br>110        | 876<br>152        | 880<br>196<br>239  |     |
|  | 400 CFM/ton             | CFM Watts     | 989 / 1118<br>95 / 127                                    | 995 / 1012<br>143 / 148  | 1002 / 899<br>193 / 163  | 1008 / 779<br>242 / 173  | 1010 / 652<br>290 / 177  | 400 CFM/ton             | CFM Watts     | 989<br>90                | 995<br>139        | 1000<br>188       | 1008<br>258<br>285 |     |
|  | 450 CFM/ton             | CFM Watts     | 1103 / 1228<br>125 / 162                                  | 1117 / 1131<br>181 / 185 | 1129 / 1028<br>238 / 203 | 1137 / 921<br>294 / 215  | 1137 / 809<br>346 / 221  | 450 CFM/ton             | CFM Watts     | 1102<br>119              | 1116<br>175       | 1127<br>231       | 1137<br>288<br>340 |     |
|  | 290 CFM/ton             | CFM Watts     | 872 / 1009<br>70 / 97                                     | 871 / 890<br>111 / 116   | 871 / 761<br>154 / 128   | 874 / 620<br>197 / 135   | 874 / 457<br>240 / 139   | 290 CFM/ton             | CFM Watts     | 871<br>67                | 872<br>109        | 871<br>151        | 874<br>195<br>237  |     |
|  | 370 + CFM/ton           | CFM Watts     | 1089 / 1214<br>121 / 157                                  | 1102 / 1116<br>176 / 180 | 1114 / 1013<br>232 / 198 | 1121 / 905<br>287 / 209  | 1122 / 791<br>339 / 215  | 350 CFM/ton             | CFM Watts     | 1033<br>101              | 1043<br>152       | 1051<br>204       | 1059<br>257<br>307 |     |
| 3 tons †   | 400 CFM/ton             | CFM Watts     | 1175 / 1298<br>147 / 188                                  | 1193 / 1205<br>208 / 212 | 1208 / 1107<br>270 / 231 | 1215 / 1006<br>329 / 244 | 1211 / 899<br>382 / 251  | 400 (a) CFM/ton         | CFM Watts     | 1171<br>139              | 1191<br>200       | 1205<br>262       | 1215<br>322<br>376 |     |
|  | 450 CFM/ton             | CFM Watts     | 1329 / 1447<br>204 / 253                                  | 1353 / 1361<br>276 / 279 | 1366 / 1270<br>345 / 299 | 1363 / 1176<br>406 / 313 | 1343 / 1077<br>456 / 321 | 450 CFM/ton             | CFM Watts     | 1324<br>192              | 1349<br>264       | 1364<br>334       | 1347<br>396<br>448 |     |
|  | 290 CFM/ton             | CFM Watts     | 1002 / 1131<br>98 / 130                                   | 1009 / 1026<br>147 / 152 | 1017 / 914<br>198 / 167  | 1023 / 797<br>248 / 177  | 1024 / 671<br>296 / 182  | 290 CFM/ton             | CFM Watts     | 997<br>92                | 1010<br>143       | 1016<br>197       | 1022<br>248<br>293 |     |
|  | 370 CFM/ton             | CFM Watts     | 1270 / 1391<br>181 / 227                                  | 1293 / 1302<br>249 / 252 | 1308 / 1210<br>316 / 272 | 1311 / 1113<br>377 / 286 | 1297 / 1012<br>429 / 293 | 350 CFM/ton             | CFM Watts     | 1196<br>146              | 1217<br>210       | 1231<br>272       | 1241<br>334<br>387 |     |
|  | 400 CFM/ton             | CFM Watts     | 1383 / 1499<br>227 / 278                                  | 1407 / 1414<br>303 / 305 | 1416 / 1325<br>372 / 325 | 1406 / 1233<br>431 / 340 | 1380 / 1136<br>478 / 348 | 400 CFM/ton             | CFM Watts     | 1379<br>214              | 1404<br>289       | 1415<br>360       | 1330<br>378<br>473 |     |
| 3.5 tons   | 450 CFM/ton             | CFM Watts     | 1579 / 1669<br>326 / 375                                  | 1583 / 1587<br>402 / 402 | 1567 / 1502<br>464 / 423 | 1474 / 1413<br>475 / 437 | 1357 / 1320<br>468 / 444 | 450 CFM/ton             | CFM Watts     | 1499<br>268              | 1508<br>342       | 1586<br>460       | 1504<br>478<br>472 |     |

- † Factory Setting
- Status LED will blink once per 100 CFM requested. In torque mode, actual airflow may be lower.
- Torque mode will reduce airflow when static is above approximately 0.35" water column.
- All heating modes default to Constant CFM.
- Cooling airflow values are with wet coil, no filter

| TAM9A0C36 Minimum Heating Airflow Settings              |  |         |          |                            |                            |             |             |             |             |
|---|--|---------|----------|----------------------------|----------------------------|-------------|-------------|-------------|-------------|
| MODEL NO.   | BAYEAA04BK1<br>BAYEAA04LG1<br>BAYEAA05BK1<br>BAYEAA05LG1 | 876/979 | 876/1236 | BAYEAA08BK1<br>BAYEAA08LG1 | BAYEAA10BK1<br>BAYEAA10LG1 | BAYEAA10LG3 | BAYEAB15BK1 | BAYEAB15LG3 | BAYEAB20BK1 |
| TAM9A0C36   |  |         |          |                            |                            |             |             |             |             |
| WITHOUT HEAT PUMP / WITH HP — SEE AIR HANDLER NAMEPLATE |  |         |          |                            |                            |             |             |             |             |
|   |  |         |          |                            |                            |             |             | 1030/1339   | -           |

(a) Factory heating default setting is 420 CFM/ton

# Features and Benefits

- Unique cabinet design
  - 2% or less air leakage
  - Precision applied — durable door seals
  - Specially designed air seal around refrigerant, condensate and conduit connections
  - Double wall foamed cabinet system
  - R-4.2 Insulating Value (Avg Insulating Value R-8.2)
  - No loose fiber design
  - Smooth cleanable interior design
  - Sweat eliminating design
  - Composite foamed cabinet doors
  - Water proof cabinet design
  - Integrated horizontal drain pans
  - Modular cabinet
- Multi-position up/down flow horizontal left/right
- Communicating or 24 Volt control
- Control Display Assembly (CDA) with enhanced diagnostic information and setup capability
- Side return option (sold as accessory)
- Control board protection pocket built into cabinet wall
- Pre-marked Conduit Connection Locations
- Alert port to view control board codes without door removal
- Alert code notification
- Low voltage terminal connection point
- Phillips head door fasteners
- **Vortica®** blower with polarized plug connections and integrated slide deck for easy removal
- Aluminum coil with integrated slide deck for easy removal and polarized plug connections on coil EEV
- Patented enhanced coil fin
- Electronic Expansion Valve (EEV) with low ambient and low superheat compressor protection
- Dual refrigerant compatible as shipped
- Slide in electric heaters with polarized plug connections (sold as accessory)
- Slide in hot water coils with polarized plug connections (sold as accessory)
- UVC light kit with safety switch and polarized plug connections (sold as accessory)
- Labeled panels and connections
- Molded in 1" standard filter rail
- Variable speed ECM motor
- Soft start fan motor operation
- **Comfort R™** mode
- Built in fan delay modes
- Maximum width of 23.5"
- Compact 20.8" depth with doors removed
- Fused 24v power
- Safety door switch
- **5 Year Warranty**
- **10 Year Warranty Registered**
- **Optional Extended Warranty Available**



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