

Model: AE4425Y-FZ1A

Product Description

| | |
|----------------------------|---|
| Type: | Reciprocating Compressors |
| Application: | HBP/CBP - High/Commercial Back Pressure |
| ProductDescription: | R-134a |
| Voltage/Frequency: | 220-240V ~ 50Hz |
| Version: | N/A |



Product Specifications

Performance

| Condition | Test Voltage | Refrigeration Capacity | | | Input Power (I) W | (E) Efficiency | | | EVAP TEMP | Condition | AMBIENT TEMP | RETURN GAS | LIQUID TEMP |
|-----------------|--------------|------------------------|---------------|----------|----------------------|----------------|----------------|------|--------------|--------------|-----------------|---------------|----------------|
| | | (R) Btu/h | (R) kcal/h | (R) W | | (E) Btu/Wh | (E) kcal/Wh | W/W | | | | | |
| ASHRAE (R-134a) | 220V ~ 50HZ | 2300 | 580 | 674 | 279 | 8.24 | 2.08 | 2.42 | 7.2°C (45°F) | 54°C (130°F) | 35°C (95°F) | 35°C (95°F) | 46°C (115°F) |
| ASHRAE (R-513A) | 220V ~ 50HZ | 2384 | 601 | 698 | 302 | 7.9 | 1.99 | 2.31 | 7.2°C (45°F) | 54°C (130°F) | 35°C (95°F) | 35°C (95°F) | 46°C (115°F) |

General

| | |
|---------------------------------|-----------------------------|
| Evaporating Temp. Range: | -15°C to 15°C (5°F to 59°F) |
| Motor Torque: | High Start Torque (HST) |
| Compressor Cooling: | Fan |

Mechanical

| | |
|--------------------------------|-------------|
| Weight: | 9 |
| Weight Unit of Measure: | KG |
| Displacement (cc): | 6.69 |
| Oil Type: | Polyolester |
| Viscosity (cSt): | 32 |
| Oil Charge (cc): | 285 |

Electrical

| | |
|---|---------|
| Voltage Range (50 Hz): | 198-253 |
| Voltage Range (60 Hz): | |
| Locked Rotor Amps (LRA): | 10.5 |
| Rated Load Amps (RLA 50 Hz): | 1.65 |
| Rated Load Amps (RLA 60 Hz): | 0 |
| Max. Continuous Current (MCC in Amps): | 0 |
| Motor Resistance (Ohm) - Main: | 12.85 |
| Motor Resistance (Ohm) - Start: | 27.56 |
| Motor Type: | CSIR |
| Overload Type: | |
| Relay Type: | |

Agency Approval

CCC Listed, CE Listed, GOST RUSSIA Listed, GOST UKRAINE Listed, VDE Listed



Performance Data Sheet

AE4425Y-FZ1A

General

| | | | |
|------------|------------------------|-------------------|-------------|
| Model | AE4425Y-FZ1A | Unit of Measure | Fahrenheit |
| Condition | ASHRAE (R-513A) | Voltage/Frequency | 220V ~ 50HZ |
| RETURN GAS | 35°C (95°F) RETURN GAS | MotorType | CSIR |

Performance Information

| EVAP TEMP (°F) | Condensing Temperature (°F) | | | | | | | | |
|----------------|-----------------------------|------|------|------|------|------|------|------|------|
| | | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |
| 5 | Btu/h | 1520 | 1290 | 1120 | 989 | 890 | 804 | 713 | 603 |
| | Watts | 187 | 181 | 179 | 180 | 183 | 186 | 187 | 185 |
| | Amps | 1.36 | 1.35 | 1.34 | 1.34 | 1.35 | 1.35 | 1.35 | 1.35 |
| | Lb/h | 19.7 | 17.1 | 15.3 | 14.1 | 13.3 | 12.6 | 11.8 | 10.7 |
| 10 | Btu/h | 1680 | 1450 | 1280 | 1150 | 1050 | 951 | 849 | 724 |
| | Watts | 191 | 188 | 188 | 192 | 197 | 201 | 203 | 202 |
| | Amps | 1.37 | 1.37 | 1.37 | 1.38 | 1.39 | 1.40 | 1.41 | 1.40 |
| | Lb/h | 21.8 | 19.3 | 17.6 | 16.5 | 15.7 | 15.0 | 14.1 | 12.8 |
| 15 | Btu/h | 1860 | 1640 | 1460 | 1330 | 1220 | 1110 | 994 | 852 |
| | Watts | 195 | 194 | 198 | 204 | 210 | 216 | 219 | 218 |
| | Amps | 1.38 | 1.38 | 1.40 | 1.42 | 1.44 | 1.46 | 1.46 | 1.46 |
| | Lb/h | 24.2 | 21.8 | 20.1 | 19.0 | 18.2 | 17.5 | 16.5 | 15.0 |
| 20 | Btu/h | 2070 | 1840 | 1660 | 1520 | 1400 | 1280 | 1150 | 990 |
| | Watts | 197 | 200 | 206 | 215 | 224 | 231 | 236 | 236 |
| | Amps | 1.38 | 1.40 | 1.43 | 1.46 | 1.49 | 1.51 | 1.52 | 1.52 |
| | Lb/h | 26.8 | 24.5 | 22.9 | 21.9 | 21.1 | 20.2 | 19.1 | 17.5 |
| 25 | Btu/h | 2300 | 2070 | 1880 | 1730 | 1600 | 1470 | 1320 | 1140 |
| | Watts | 199 | 205 | 215 | 226 | 237 | 246 | 252 | 253 |
| | Amps | 1.38 | 1.42 | 1.45 | 1.50 | 1.53 | 1.57 | 1.59 | 1.59 |
| | Lb/h | 29.7 | 27.5 | 26.0 | 25.0 | 24.2 | 23.2 | 22.0 | 20.2 |
| 30 | Btu/h | 2550 | 2320 | 2130 | 1970 | 1820 | 1670 | 1500 | 1300 |
| | Watts | 199 | 209 | 222 | 236 | 250 | 261 | 269 | 271 |
| | Amps | 1.38 | 1.43 | 1.48 | 1.53 | 1.58 | 1.62 | 1.65 | 1.66 |
| | Lb/h | 33.0 | 30.9 | 29.5 | 28.4 | 27.5 | 26.6 | 25.2 | 23.2 |
| 35 | Btu/h | 2830 | 2590 | 2390 | 2220 | 2060 | 1890 | 1710 | 1480 |
| | Watts | 198 | 213 | 229 | 246 | 263 | 276 | 286 | 289 |
| | Amps | 1.38 | 1.44 | 1.51 | 1.57 | 1.63 | 1.68 | 1.72 | 1.73 |
| | Lb/h | 36.6 | 34.6 | 33.2 | 32.2 | 31.3 | 30.2 | 28.7 | 26.6 |
| 40 | Btu/h | 3150 | 2900 | 2690 | 2500 | 2320 | 2140 | 1930 | 1680 |
| | Watts | 197 | 215 | 235 | 256 | 275 | 291 | 303 | 308 |
| | Amps | 1.37 | 1.45 | 1.53 | 1.61 | 1.68 | 1.74 | 1.78 | 1.81 |
| | Lb/h | 40.7 | 38.8 | 37.4 | 36.4 | 35.4 | 34.2 | 32.6 | 30.2 |
| 45 | Btu/h | 3490 | 3230 | 3010 | 2810 | 2610 | 2400 | 2170 | 1890 |
| | Watts | 193 | 216 | 240 | 264 | 287 | 305 | 319 | 326 |
| | Amps | 1.36 | 1.46 | 1.55 | 1.65 | 1.73 | 1.80 | 1.85 | 1.89 |

| | | | | | | | | | |
|----|-------|------|------|------|------|------|------|------|------|
| | Lb/h | 45.2 | 43.4 | 42.0 | 41.0 | 39.9 | 38.6 | 36.8 | 34.3 |
| 50 | Btu/h | 3870 | 3600 | 3360 | 3140 | 2930 | 2700 | 2430 | 2130 |
| | Watts | 189 | 216 | 245 | 272 | 298 | 319 | 336 | 345 |
| | Amps | 1.35 | 1.46 | 1.57 | 1.68 | 1.78 | 1.86 | 1.92 | 1.96 |
| | Lb/h | 50.2 | 48.4 | 47.1 | 46.0 | 44.9 | 43.5 | 41.5 | 38.8 |
| 55 | Btu/h | 4280 | 4000 | 3740 | 3510 | 3270 | 3010 | 2720 | 2390 |
| | Watts | 183 | 215 | 248 | 279 | 308 | 333 | 352 | 363 |
| | Amps | 1.33 | 1.46 | 1.59 | 1.71 | 1.82 | 1.92 | 1.99 | 2.04 |
| | Lb/h | 55.7 | 54.0 | 52.7 | 51.5 | 50.3 | 48.8 | 46.7 | 43.7 |

| COEFFICIENTS | CAPACITY | POWER | CURRENT | MASS FLOW |
|--------------|---------------|---------------|---------------|---------------|
| C1 | 7.451287E+03 | 6.391916E+02 | 2.551570E+00 | 1.051625E+02 |
| C2 | -2.522380E+00 | -6.421430E+00 | -2.577101E-02 | -2.138499E-01 |
| C3 | -1.417771E+02 | -1.186416E+01 | -3.075542E-02 | -2.116455E+00 |
| C4 | 6.145083E-01 | -4.271299E-02 | -1.209378E-04 | 4.911426E-03 |
| C5 | 6.025029E-01 | 1.270277E-01 | 4.575955E-04 | 1.085178E-02 |
| C6 | 1.036255E+00 | 9.833809E-02 | 2.534367E-04 | 1.623383E-02 |
| C7 | 2.546923E-03 | -1.157280E-04 | -6.220530E-07 | 4.590365E-05 |
| C8 | -3.584325E-03 | 3.859758E-04 | 1.507638E-06 | -1.838126E-05 |
| C9 | -2.900133E-03 | -4.269361E-04 | -1.475865E-06 | -4.600723E-05 |
| C10 | -2.670547E-03 | -2.673335E-04 | -6.951669E-07 | -4.274170E-05 |

$$\text{Value} = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE4425Y-FZ1A

General

| | | | |
|------------|------------------------|-------------------|-------------|
| Model | AE4425Y-FZ1A | Unit of Measure | Celsius |
| Condition | EN12900 | Voltage/Frequency | 220V ~ 50HZ |
| RETURN GAS | 20°C (68°F) RETURN GAS | MotorType | CSIR |

Performance Information

| EVAP TEMP (°C) | Condensing Temperature (°C) | | | | | | | | |
|----------------|-----------------------------|------|------|------|------|------|------|------|------|
| | | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| -15 | Btu/h | 1710 | 1580 | 1460 | 1340 | 1230 | 1120 | 1020 | 927 |
| | Watts (Power) | 271 | 279 | 288 | 295 | 302 | 307 | 311 | 312 |
| | Amps | 2.67 | 2.69 | 2.70 | 2.71 | 2.71 | 2.72 | 2.71 | 2.71 |
| | Lb/h | 22.4 | 21.6 | 20.9 | 20.2 | 19.5 | 18.9 | 18.4 | 17.9 |
| -10 | Btu/h | 2180 | 2040 | 1890 | 1750 | 1600 | 1470 | 1330 | 1210 |
| | Watts (Power) | 290 | 301 | 312 | 322 | 331 | 339 | 346 | 351 |
| | Amps | 2.70 | 2.72 | 2.73 | 2.75 | 2.77 | 2.78 | 2.79 | 2.79 |
| | Lb/h | 28.7 | 27.9 | 27.1 | 26.2 | 25.4 | 24.6 | 23.8 | 23.0 |
| -6.7 | Btu/h | 2540 | 2380 | 2220 | 2050 | 1890 | 1730 | 1570 | 1420 |
| | Watts (Power) | 304 | 316 | 328 | 340 | 351 | 361 | 370 | 377 |
| | Amps | 2.72 | 2.74 | 2.77 | 2.79 | 2.81 | 2.83 | 2.85 | 2.86 |
| | Lb/h | 33.6 | 32.7 | 31.8 | 30.9 | 29.9 | 29.0 | 28.0 | 27.1 |
| -5 | Btu/h | 2740 | 2570 | 2400 | 2220 | 2050 | 1880 | 1710 | 1540 |
| | Watts (Power) | 310 | 324 | 337 | 350 | 362 | 373 | 383 | 391 |
| | Amps | 2.74 | 2.76 | 2.78 | 2.81 | 2.83 | 2.86 | 2.88 | 2.90 |
| | Lb/h | 36.3 | 35.4 | 34.5 | 33.5 | 32.5 | 31.5 | 30.5 | 29.4 |
| 0 | Btu/h | 3400 | 3200 | 2990 | 2780 | 2570 | 2360 | 2150 | 1940 |
| | Watts (Power) | 329 | 345 | 361 | 377 | 392 | 407 | 421 | 433 |
| | Amps | 2.78 | 2.81 | 2.84 | 2.88 | 2.91 | 2.95 | 2.98 | 3.01 |
| | Lb/h | 45.3 | 44.4 | 43.4 | 42.3 | 41.1 | 39.9 | 38.7 | 37.4 |
| 5 | Btu/h | 4170 | 3930 | 3680 | 3430 | 3170 | 2920 | 2660 | 2410 |
| | Watts (Power) | 344 | 363 | 383 | 402 | 421 | 440 | 458 | 475 |
| | Amps | 2.82 | 2.86 | 2.90 | 2.94 | 2.99 | 3.04 | 3.09 | 3.14 |
| | Lb/h | 55.9 | 54.9 | 53.9 | 52.7 | 51.4 | 50.0 | 48.6 | 47.0 |
| 7.2 | Btu/h | 4540 | 4280 | 4010 | 3740 | 3470 | 3190 | 2920 | 2640 |
| | Watts (Power) | 350 | 370 | 391 | 413 | 433 | 454 | 474 | 492 |
| | Amps | 2.84 | 2.88 | 2.92 | 2.98 | 3.03 | 3.09 | 3.14 | 3.20 |
| | Lb/h | 61.1 | 60.1 | 59.0 | 57.8 | 56.5 | 55.0 | 53.5 | 51.8 |
| 10 | Btu/h | 5040 | 4760 | 4470 | 4170 | 3870 | 3570 | 3270 | 2960 |
| | Watts (Power) | 355 | 378 | 401 | 425 | 448 | 471 | 493 | 514 |
| | Amps | 2.85 | 2.90 | 2.95 | 3.01 | 3.07 | 3.14 | 3.20 | 3.27 |
| | Lb/h | 68.2 | 67.3 | 66.2 | 64.9 | 63.5 | 61.9 | 60.3 | 58.5 |
| 15 | Btu/h | 6040 | 5710 | 5370 | 5030 | 4680 | 4320 | 3960 | 3600 |
| | Watts (Power) | 361 | 387 | 415 | 442 | 470 | 497 | 525 | 551 |
| | Amps | 2.88 | 2.94 | 3.00 | 3.07 | 3.15 | 3.23 | 3.31 | 3.39 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| | Lb/h | 82.5 | 81.5 | 80.4 | 79.0 | 77.5 | 75.8 | 74.0 | 72.0 |
|--|------|------|------|------|------|------|------|------|------|

| COEFFICIENTS | CAPACITY | POWER | CURRENT | MASS FLOW |
|--------------|---------------|---------------|---------------|---------------|
| C1 | 4.441585E+03 | 2.463917E+02 | 2.762885E+00 | 4.884869E+01 |
| C2 | 1.756639E+02 | 6.420573E-01 | 3.895616E-03 | 1.841388E+00 |
| C3 | -2.729852E+01 | 1.968300E+00 | -5.865424E-03 | -4.912851E-02 |
| C4 | 2.661906E+00 | -1.023878E-01 | -1.472259E-04 | 3.004821E-02 |
| C5 | -9.122450E-01 | 7.025442E-02 | -1.837935E-07 | 8.129872E-03 |
| C6 | -3.085982E-01 | 3.585090E-02 | 2.672622E-04 | -2.576329E-03 |
| C7 | 1.075845E-02 | -1.882997E-03 | -6.320232E-06 | 2.192317E-04 |
| C8 | -1.907069E-02 | 1.477910E-03 | 4.718652E-06 | 5.564460E-05 |
| C9 | -7.055070E-03 | 7.505685E-04 | 4.849225E-06 | -1.459407E-04 |
| C10 | 2.104463E-03 | -3.375648E-04 | -1.807700E-06 | 9.551271E-06 |

$$\text{Value} = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE4425Y-FZ1A

General

| | | | |
|------------|------------------------|-------------------|-------------|
| Model | AE4425Y-FZ1A | Unit of Measure | Fahrenheit |
| Condition | EN12900 | Voltage/Frequency | 220V ~ 50HZ |
| RETURN GAS | 20°C (68°F) RETURN GAS | MotorType | CSIR |

Performance Information

| EVAP TEMP (°F) | Condensing Temperature (°F) | | | | | | | | |
|----------------|-----------------------------|------|------|------|------|------|------|------|------|
| | | 80 | 90 | 100 | 110 | 120 | 130 | 140 | 150 |
| 5 | Btu/h | 1790 | 1650 | 1520 | 1380 | 1260 | 1130 | 1020 | 917 |
| | Watts | 264 | 275 | 284 | 293 | 300 | 306 | 311 | 312 |
| | Amps | 2.67 | 2.68 | 2.69 | 2.70 | 2.71 | 2.72 | 2.71 | 2.70 |
| | Lb/h | 22.9 | 22.1 | 21.2 | 20.4 | 19.7 | 19.0 | 18.4 | 17.9 |
| 10 | Btu/h | 2050 | 1900 | 1750 | 1600 | 1460 | 1320 | 1190 | 1060 |
| | Watts | 275 | 286 | 297 | 307 | 316 | 324 | 330 | 333 |
| | Amps | 2.68 | 2.69 | 2.71 | 2.72 | 2.74 | 2.75 | 2.75 | 2.75 |
| | Lb/h | 26.3 | 25.4 | 24.5 | 23.6 | 22.8 | 22.0 | 21.2 | 20.5 |
| 15 | Btu/h | 2340 | 2170 | 2010 | 1840 | 1680 | 1520 | 1370 | 1230 |
| | Watts | 285 | 298 | 310 | 322 | 332 | 342 | 350 | 355 |
| | Amps | 2.70 | 2.71 | 2.73 | 2.75 | 2.77 | 2.79 | 2.80 | 2.80 |
| | Lb/h | 30.1 | 29.1 | 28.2 | 27.2 | 26.3 | 25.4 | 24.4 | 23.6 |
| 20 | Btu/h | 2650 | 2470 | 2290 | 2110 | 1930 | 1750 | 1570 | 1410 |
| | Watts | 295 | 309 | 323 | 336 | 349 | 360 | 370 | 378 |
| | Amps | 2.71 | 2.73 | 2.76 | 2.78 | 2.81 | 2.83 | 2.85 | 2.86 |
| | Lb/h | 34.2 | 33.2 | 32.3 | 31.2 | 30.2 | 29.1 | 28.1 | 27.0 |
| 25 | Btu/h | 3000 | 2800 | 2600 | 2400 | 2200 | 2000 | 1800 | 1610 |
| | Watts | 305 | 321 | 336 | 351 | 366 | 379 | 391 | 401 |
| | Amps | 2.73 | 2.76 | 2.78 | 2.81 | 2.85 | 2.88 | 2.90 | 2.92 |
| | Lb/h | 38.8 | 37.8 | 36.8 | 35.7 | 34.5 | 33.4 | 32.2 | 30.9 |
| 30 | Btu/h | 3370 | 3160 | 2940 | 2720 | 2490 | 2270 | 2040 | 1830 |
| | Watts | 315 | 332 | 349 | 366 | 382 | 398 | 412 | 425 |
| | Amps | 2.75 | 2.78 | 2.81 | 2.85 | 2.89 | 2.92 | 2.96 | 2.99 |
| | Lb/h | 43.8 | 42.8 | 41.7 | 40.6 | 39.3 | 38.1 | 36.7 | 35.3 |
| 35 | Btu/h | 3780 | 3550 | 3310 | 3060 | 2810 | 2560 | 2310 | 2070 |
| | Watts | 323 | 342 | 361 | 380 | 399 | 416 | 433 | 448 |
| | Amps | 2.77 | 2.81 | 2.84 | 2.89 | 2.93 | 2.97 | 3.02 | 3.06 |
| | Lb/h | 49.2 | 48.3 | 47.2 | 45.9 | 44.6 | 43.3 | 41.8 | 40.3 |
| 40 | Btu/h | 4230 | 3970 | 3710 | 3430 | 3160 | 2880 | 2600 | 2330 |
| | Watts | 330 | 351 | 372 | 393 | 414 | 434 | 454 | 472 |
| | Amps | 2.79 | 2.83 | 2.87 | 2.92 | 2.97 | 3.03 | 3.08 | 3.13 |
| | Lb/h | 55.2 | 54.2 | 53.1 | 51.9 | 50.5 | 49.0 | 47.4 | 45.7 |
| 45 | Btu/h | 4710 | 4430 | 4140 | 3840 | 3530 | 3230 | 2920 | 2610 |
| | Watts | 336 | 359 | 382 | 406 | 429 | 452 | 474 | 495 |
| | Amps | 2.81 | 2.85 | 2.90 | 2.96 | 3.02 | 3.08 | 3.14 | 3.20 |

| | | | | | | | | | |
|----|-------|------|------|------|------|------|------|------|------|
| | Lb/h | 61.7 | 60.8 | 59.6 | 58.3 | 56.8 | 55.3 | 53.5 | 51.7 |
| 50 | Btu/h | 5220 | 4920 | 4600 | 4270 | 3940 | 3600 | 3270 | 2930 |
| | Watts | 340 | 365 | 391 | 417 | 443 | 468 | 493 | 517 |
| | Amps | 2.83 | 2.87 | 2.93 | 2.99 | 3.06 | 3.13 | 3.20 | 3.27 |
| | Lb/h | 68.8 | 67.8 | 66.7 | 65.3 | 63.8 | 62.1 | 60.3 | 58.3 |
| 55 | Btu/h | 5780 | 5440 | 5100 | 4740 | 4380 | 4010 | 3640 | 3260 |
| | Watts | 343 | 370 | 398 | 426 | 455 | 483 | 511 | 538 |
| | Amps | 2.84 | 2.89 | 2.96 | 3.03 | 3.10 | 3.18 | 3.26 | 3.35 |
| | Lb/h | 76.5 | 75.5 | 74.3 | 72.9 | 71.4 | 69.6 | 67.6 | 65.5 |

| COEFFICIENTS | CAPACITY | POWER | CURRENT | MASS FLOW |
|--------------|---------------|---------------|---------------|---------------|
| C1 | 2.333944E+03 | 2.011158E+02 | 2.827693E+00 | 2.746011E+01 |
| C2 | 5.175132E+01 | 1.344215E+00 | 4.253508E-03 | 4.585491E-01 |
| C3 | -4.777718E+00 | 3.672122E-02 | -6.956814E-03 | -9.314623E-02 |
| C4 | 7.491223E-01 | -8.714591E-03 | 3.270555E-05 | 5.360067E-03 |
| C5 | 5.145369E-03 | -2.771717E-03 | -1.050540E-04 | 3.500123E-03 |
| C6 | -9.117678E-02 | 1.250337E-02 | 8.563718E-05 | -1.516139E-04 |
| C7 | 1.844728E-03 | -3.228732E-04 | -1.083716E-06 | 3.759117E-05 |
| C8 | -3.270009E-03 | 2.534139E-04 | 8.090967E-07 | 9.541255E-06 |
| C9 | -1.209717E-03 | 1.286983E-04 | 8.314857E-07 | -2.502412E-05 |
| C10 | 3.608475E-04 | -5.788149E-05 | -3.099623E-07 | 1.637735E-06 |

$$\text{Value} = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature

AE4425Y-FZ1A
General

| | | | |
|------------|------------------------|-------------------|-------------|
| Model | AE4425Y-FZ1A | Unit of Measure | Celsius |
| Condition | EN12900 | Voltage/Frequency | 240V ~ 50HZ |
| RETURN GAS | 20°C (68°F) RETURN GAS | MotorType | CSIR |

Performance Information

| EVAP TEMP (°C) | Condensing Temperature (°C) | | | | | | | | |
|----------------|-----------------------------|------|------|------|------|------|------|------|------|
| | | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| -15 | Watts (Capacity) | 324 | 314 | 295 | 269 | 237 | 202 | 164 | 127 |
| | Watts (Power) | 164 | 173 | 179 | 182 | 182 | 181 | 177 | 172 |
| | Amps | 1.30 | 1.32 | 1.34 | 1.34 | 1.34 | 1.34 | 1.33 | 1.31 |
| | Lb/h | 7.90 | 8.08 | 7.98 | 7.66 | 7.16 | 6.55 | 5.86 | 5.15 |
| -10 | Watts (Capacity) | 407 | 394 | 372 | 344 | 312 | 276 | 239 | 203 |
| | Watts (Power) | 175 | 186 | 194 | 200 | 204 | 205 | 206 | 204 |
| | Amps | 1.33 | 1.36 | 1.38 | 1.39 | 1.40 | 1.41 | 1.41 | 1.41 |
| | Lb/h | 9.69 | 9.91 | 9.87 | 9.62 | 9.22 | 8.71 | 8.15 | 7.58 |
| -6.7 | Watts (Capacity) | 469 | 453 | 428 | 398 | 363 | 326 | 288 | 251 |
| | Watts (Power) | 181 | 194 | 203 | 211 | 217 | 221 | 223 | 225 |
| | Amps | 1.35 | 1.38 | 1.41 | 1.43 | 1.44 | 1.46 | 1.47 | 1.47 |
| | Lb/h | 11.0 | 11.2 | 11.2 | 11.0 | 10.6 | 10.1 | 9.62 | 9.12 |
| -5 | Watts (Capacity) | 505 | 485 | 459 | 427 | 390 | 352 | 313 | 275 |
| | Watts (Power) | 184 | 197 | 208 | 216 | 223 | 228 | 232 | 236 |
| | Amps | 1.36 | 1.39 | 1.42 | 1.44 | 1.47 | 1.48 | 1.50 | 1.51 |
| | Lb/h | 11.7 | 11.9 | 11.9 | 11.7 | 11.3 | 10.9 | 10.4 | 9.91 |
| 0 | Watts (Capacity) | 622 | 594 | 560 | 521 | 479 | 435 | 392 | 350 |
| | Watts (Power) | 190 | 205 | 219 | 230 | 241 | 249 | 257 | 265 |
| | Amps | 1.38 | 1.42 | 1.46 | 1.49 | 1.52 | 1.56 | 1.58 | 1.61 |
| | Lb/h | 14.1 | 14.3 | 14.2 | 14.0 | 13.6 | 13.1 | 12.7 | 12.3 |
| 5 | Watts (Capacity) | 765 | 727 | 683 | 634 | 583 | 532 | 481 | 433 |
| | Watts (Power) | 193 | 211 | 228 | 242 | 256 | 269 | 281 | 293 |
| | Amps | 1.40 | 1.44 | 1.49 | 1.53 | 1.58 | 1.62 | 1.67 | 1.71 |
| | Lb/h | 17.1 | 17.1 | 16.9 | 16.6 | 16.2 | 15.7 | 15.2 | 14.8 |
| 7.2 | Watts (Capacity) | 838 | 794 | 745 | 691 | 636 | 580 | 525 | 474 |
| | Watts (Power) | 194 | 213 | 231 | 247 | 262 | 276 | 290 | 304 |
| | Amps | 1.40 | 1.45 | 1.50 | 1.55 | 1.60 | 1.65 | 1.70 | 1.76 |
| | Lb/h | 18.6 | 18.5 | 18.3 | 17.9 | 17.5 | 17.0 | 16.4 | 16.0 |
| 10 | Watts (Capacity) | 940 | 888 | 832 | 771 | 709 | 647 | 587 | 531 |
| | Watts (Power) | 194 | 215 | 234 | 252 | 269 | 286 | 302 | 318 |
| | Amps | 1.40 | 1.46 | 1.51 | 1.57 | 1.63 | 1.69 | 1.75 | 1.81 |
| | Lb/h | 20.7 | 20.5 | 20.2 | 19.8 | 19.3 | 18.7 | 18.1 | 17.6 |
| 15 | Watts (Capacity) | 1150 | 1090 | 1010 | 939 | 863 | 788 | 716 | 648 |
| | Watts (Power) | 192 | 216 | 238 | 259 | 280 | 301 | 321 | 342 |
| | Amps | 1.40 | 1.46 | 1.53 | 1.60 | 1.67 | 1.75 | 1.82 | 1.90 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| | Lb/h | 25.1 | 24.7 | 24.2 | 23.6 | 22.9 | 22.2 | 21.5 | 20.9 |
|--|------|------|------|------|------|------|------|------|------|

| COEFFICIENTS | CAPACITY | POWER | CURRENT | MASS FLOW |
|--------------|---------------|---------------|---------------|---------------|
| C1 | 5.446330E+02 | 3.352130E+01 | 1.110840E+00 | 5.672270E+00 |
| C2 | 4.041770E+01 | -5.672880E-01 | 1.694830E-03 | 7.031830E-01 |
| C3 | 1.194750E+01 | 7.422650E+00 | 1.023630E-02 | 5.690880E-01 |
| C4 | 8.198500E-01 | -6.538010E-02 | -2.402570E-04 | 1.656480E-02 |
| C5 | -5.741940E-01 | 1.139180E-02 | -1.104900E-04 | -7.842620E-03 |
| C6 | -3.833400E-01 | -8.634450E-02 | -4.042260E-05 | -1.161830E-02 |
| C7 | 7.861270E-03 | -1.017140E-04 | -2.689910E-06 | 1.901400E-04 |
| C8 | -1.007500E-02 | 4.690490E-04 | 3.280040E-06 | -2.016620E-04 |
| C9 | 2.957740E-03 | 1.311040E-03 | 6.133120E-06 | 6.863930E-05 |
| C10 | 2.361850E-03 | 4.141480E-04 | 2.258680E-08 | 6.804600E-05 |

$$\text{Value} = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature



Performance Data Sheet

AE4425Y-FZ1A

General

| | | | |
|------------|------------------------|-------------------|-------------|
| Model | AE4425Y-FZ1A | Unit of Measure | Celsius |
| Condition | EN12900 (R-134a) | Voltage/Frequency | 220V ~ 50HZ |
| RETURN GAS | 20°C (68°F) RETURN GAS | MotorType | CSIR |

Performance Information

| EVAP TEMP (°C) | Condensing Temperature (°C) | | | | | | | | |
|----------------|-----------------------------|------|------|------|------|------|------|------|------|
| | | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| -15 | Btu/h | 1500 | 1450 | 1400 | 1350 | 1300 | 1250 | 1200 | 1150 |
| | Watts (Power) | 192 | 195 | 199 | 202 | 206 | 210 | 214 | 218 |
| | Amps | 2.68 | 2.67 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 | 2.66 |
| | Lb/h | 17.6 | 17.0 | 16.4 | 15.8 | 15.3 | 14.7 | 14.2 | 13.7 |
| -10 | Btu/h | 1670 | 1630 | 1580 | 1530 | 1480 | 1430 | 1370 | 1320 |
| | Watts (Power) | 198 | 202 | 205 | 209 | 212 | 216 | 220 | 224 |
| | Amps | 2.68 | 2.67 | 2.66 | 2.66 | 2.65 | 2.65 | 2.65 | 2.65 |
| | Lb/h | 19.7 | 19.1 | 18.5 | 18.0 | 17.5 | 16.9 | 16.5 | 16.0 |
| -6.7 | Btu/h | 1810 | 1760 | 1710 | 1660 | 1610 | 1560 | 1500 | 1450 |
| | Watts (Power) | 203 | 206 | 209 | 213 | 217 | 221 | 225 | 229 |
| | Amps | 2.68 | 2.67 | 2.66 | 2.66 | 2.65 | 2.65 | 2.65 | 2.65 |
| | Lb/h | 21.2 | 20.6 | 20.1 | 19.6 | 19.1 | 18.5 | 18.1 | 17.6 |
| -5 | Btu/h | 1880 | 1830 | 1790 | 1730 | 1680 | 1630 | 1570 | 1520 |
| | Watts (Power) | 205 | 208 | 212 | 216 | 219 | 224 | 228 | 232 |
| | Amps | 2.68 | 2.67 | 2.66 | 2.66 | 2.65 | 2.65 | 2.65 | 2.65 |
| | Lb/h | 22.0 | 21.5 | 20.9 | 20.4 | 19.9 | 19.4 | 18.9 | 18.5 |
| 0 | Btu/h | 2120 | 2070 | 2020 | 1970 | 1910 | 1860 | 1800 | 1740 |
| | Watts (Power) | 212 | 215 | 219 | 223 | 227 | 231 | 236 | 240 |
| | Amps | 2.69 | 2.68 | 2.67 | 2.66 | 2.66 | 2.65 | 2.65 | 2.65 |
| | Lb/h | 24.6 | 24.1 | 23.6 | 23.1 | 22.6 | 22.2 | 21.7 | 21.2 |
| 5 | Btu/h | 2390 | 2340 | 2290 | 2230 | 2170 | 2110 | 2050 | 1990 |
| | Watts (Power) | 219 | 222 | 226 | 230 | 235 | 239 | 244 | 249 |
| | Amps | 2.70 | 2.69 | 2.68 | 2.67 | 2.66 | 2.66 | 2.66 | 2.66 |
| | Lb/h | 27.4 | 27.0 | 26.5 | 26.1 | 25.6 | 25.2 | 24.7 | 24.3 |
| 7.2 | Btu/h | 2520 | 2470 | 2410 | 2360 | 2300 | 2230 | 2170 | 2100 |
| | Watts (Power) | 222 | 225 | 229 | 233 | 238 | 243 | 248 | 253 |
| | Amps | 2.70 | 2.69 | 2.68 | 2.67 | 2.67 | 2.66 | 2.66 | 2.66 |
| | Lb/h | 28.8 | 28.4 | 27.9 | 27.5 | 27.1 | 26.6 | 26.2 | 25.7 |
| 10 | Btu/h | 2690 | 2640 | 2580 | 2520 | 2460 | 2400 | 2330 | 2260 |
| | Watts (Power) | 225 | 229 | 233 | 238 | 242 | 247 | 253 | 258 |
| | Amps | 2.71 | 2.70 | 2.69 | 2.68 | 2.67 | 2.67 | 2.67 | 2.67 |
| | Lb/h | 30.6 | 30.2 | 29.8 | 29.4 | 29.0 | 28.5 | 28.1 | 27.7 |
| 15 | Btu/h | 3030 | 2980 | 2920 | 2850 | 2780 | 2720 | 2640 | 2570 |
| | Watts (Power) | 231 | 235 | 240 | 245 | 250 | 255 | 261 | 267 |
| | Amps | 2.72 | 2.71 | 2.70 | 2.69 | 2.68 | 2.68 | 2.68 | 2.68 |

| | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|
| | Lb/h | 34.1 | 33.7 | 33.4 | 33.0 | 32.6 | 32.2 | 31.8 | 31.4 |
|--|------|------|------|------|------|------|------|------|------|

| COEFFICIENTS | CAPACITY | POWER | CURRENT | MASS FLOW |
|--------------|---------------|---------------|---------------|---------------|
| C1 | 2.333944E+03 | 2.011158E+02 | 2.827693E+00 | 2.746011E+01 |
| C2 | 5.175132E+01 | 1.344215E+00 | 4.253508E-03 | 4.585491E-01 |
| C3 | -4.777718E+00 | 3.672122E-02 | -6.956814E-03 | -9.314623E-02 |
| C4 | 7.491223E-01 | -8.714591E-03 | 3.270555E-05 | 5.360067E-03 |
| C5 | 5.145369E-03 | -2.771717E-03 | -1.050540E-04 | 3.500123E-03 |
| C6 | -9.117678E-02 | 1.250337E-02 | 8.563718E-05 | -1.516139E-04 |
| C7 | 1.844728E-03 | -3.228732E-04 | -1.083716E-06 | 3.759117E-05 |
| C8 | -3.270009E-03 | 2.534139E-04 | 8.090967E-07 | 9.541255E-06 |
| C9 | -1.209717E-03 | 1.286983E-04 | 8.314857E-07 | -2.502412E-05 |
| C10 | 3.608475E-04 | -5.788149E-05 | -3.099623E-07 | 1.637735E-06 |

$$\text{Value} = C1 + C2 * Te + C4 * Te^2 + C7 * Te^3 + (C3 + C5 * Te + C8 * Te^2) * Tc + (C6 + C9 * Te) * Tc^2 + C10 * Tc^3$$

Te = Evaporator Temperature

Tc = Condensing Temperature