



**tecumseh**

**AE4450Z-FZ1A**

220 - 240V 1~ 50 Hz

Compressor

CBP/HBP (M-HBP)

R-404A / R-407A / R-448A / R-449A / R-452A

Voltage Code : FZ

| Refrigerant | Frequency | Nominal Cooling Capacity (*) |       | Sound Power<br>ISO3745 / ISO 3743-1 |
|-------------|-----------|------------------------------|-------|-------------------------------------|
|             |           | Watts                        | BTU/h |                                     |
| R-452A      | 50HZ      | 768                          | 2619  |                                     |
| R-404A      | 50HZ      | 768                          | 2620  |                                     |
| R-448A      | 50HZ      | 807                          | 2751  |                                     |
| R-449A      | 50HZ      | 806                          | 2748  |                                     |

(\*) Operating conditions ARI 520-90 : Dew / T°Cond. 120°F / T°Evap 20°F / T°Evaporating 20°F / T°Superheat 32°F



\*Non-contractual picture

#### Dimensions

|                  |                 |
|------------------|-----------------|
| Weight           | 10.7 kg (24 lb) |
| Length           | 251 mm (9.9 in) |
| Width            | 161 mm (6.3 in) |
| Height           | 207 mm (8.2 in) |
| Ø Suction Tube   | 3/8 in (9.52mm) |
| Ø Discharge Tube | 1/4 in (6.35mm) |

#### Certificates



#### General

|                         |                             |
|-------------------------|-----------------------------|
| Compressor Type         | Reciprocating               |
| Displacement (cc)       | 8.85                        |
| Horse Power             | 1/2                         |
| Compressor Cooling      | Fan                         |
| Evaporating Temp. Range | -15°C to 15°C (5°F to 59°F) |
| Expansion Device        | Capil. Tube/Expans. Valve   |
| Oil Type                | P.O.E 32                    |
| Oil Charge (cc)         | 366                         |

#### Electrical

|                          |                    |
|--------------------------|--------------------|
| Motor Type               | CSIR               |
| Main Winding (Ohm)       | 5.74               |
| Start Winding (Ohm)      | 25.41              |
| Current RLA 50Hz (A)     | 3.52               |
| Current LRA (A)          | 17.5               |
| Start Capacitor          | 88-108 µF / 250 V  |
| Overload                 | T1419-23           |
| - Time Check             | 6.5-16.0s / 10.7 A |
| - Open Temp / Close Temp | 140 °C / 52 °C     |
| Current Relay            | RP4938             |
| - Pick Up / Drop Out     | 8.2 A / 7 A        |

Note : Tecumseh reserves the right to change information contained in this document without notification.



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**AE4450Z-FZ1A**

220 - 240V 1~ 50 Hz

Performances are given at rating conditions ARI 520-90  
Conditions DEW

Evaporating : 20 °F  
Superheat : 32 °F

## 50HZ R-452A

| Condensing | Evaporating      | (°F)    | -15  | -5   | 5    | 15   | 25   | 35   | 45   | 55   |
|------------|------------------|---------|------|------|------|------|------|------|------|------|
| <b>90</b>  | Refrig. Capacity | (Btu/h) | 1214 | 1790 | 2419 | 3129 | 3952 | 4915 | 6050 | 7387 |
|            | Power Input      | (W)     | 340  | 364  | 387  | 409  | 428  | 440  | 445  | 440  |
|            | Amps             | (A)     | 2.61 | 2.65 | 2.71 | 2.77 | 2.84 | 2.91 | 2.97 | 3.02 |
| <b>105</b> | Refrig. Capacity | (Btu/h) | 981  | 1525 | 2100 | 2735 | 3460 | 4304 | 5297 | 6468 |
|            | Power Input      | (W)     | 346  | 377  | 409  | 440  | 468  | 490  | 505  | 510  |
|            | Amps             | (A)     | 2.44 | 2.62 | 2.78 | 2.92 | 3.03 | 3.12 | 3.17 | 3.18 |
| <b>120</b> | Refrig. Capacity | (Btu/h) |      |      | 1753 | 2315 | 2945 | 3671 | 4523 | 5531 |
|            | Power Input      | (W)     |      |      | 429  | 470  | 508  | 541  | 567  | 583  |
|            | Amps             | (A)     |      |      | 2.87 | 3.07 | 3.22 | 3.3  | 3.32 | 3.28 |
| <b>140</b> | Refrig. Capacity | (Btu/h) |      |      |      | 1724 | 2228 | 2800 | 3467 | 4258 |
|            | Power Input      | (W)     |      |      |      | 499  | 552  | 602  | 644  | 678  |
|            | Amps             | (A)     |      |      |      | 3.09 | 3.25 | 3.31 | 3.27 | 3.12 |

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## 50HZ R-404A

| Condensing | Evaporating      | (°F)    | -15  | -5   | 5    | 15   | 25   | 35   | 45   | 55   |
|------------|------------------|---------|------|------|------|------|------|------|------|------|
| <b>90</b>  | Refrig. Capacity | (Btu/h) | 1415 | 1927 | 2515 | 3204 | 4019 | 4987 | 6133 | 7482 |
|            | Power Input      | (W)     | 335  | 368  | 399  | 426  | 447  | 462  | 467  | 462  |
|            | Amps             | (A)     | 2.69 | 2.73 | 2.79 | 2.86 | 2.92 | 2.99 | 3.05 | 3.1  |
| <b>105</b> | Refrig. Capacity | (Btu/h) | 1102 | 1603 | 2150 | 2769 | 3486 | 4325 | 5314 | 6476 |
|            | Power Input      | (W)     | 345  | 385  | 424  | 459  | 490  | 514  | 529  | 535  |
|            | Amps             | (A)     | 2.51 | 2.69 | 2.86 | 3    | 3.12 | 3.21 | 3.26 | 3.27 |
| <b>120</b> | Refrig. Capacity | (Btu/h) |      | 1268 | 1774 | 2322 | 2938 | 3649 | 4479 | 5453 |
|            | Power Input      | (W)     |      | 398  | 446  | 491  | 532  | 567  | 594  | 612  |
|            | Amps             | (A)     |      | 2.7  | 2.96 | 3.16 | 3.31 | 3.4  | 3.42 | 3.37 |
| <b>140</b> | Refrig. Capacity | (Btu/h) |      |      | 1245 | 1698 | 2180 | 2716 | 3333 | 4056 |
|            | Power Input      | (W)     |      |      | 462  | 523  | 579  | 631  | 676  | 712  |
|            | Amps             | (A)     |      |      | 2.92 | 3.18 | 3.34 | 3.41 | 3.37 | 3.21 |



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**AE4450Z-FZ1A**

220 - 240V 1~ 50 Hz

Performances are given at rating conditions ARI 520-90  
Conditions DEW

Evaporating : 20 °F  
Superheat : 32 °F

### 50HZ R-448A\*

| Condensing | Evaporating      | (°F)    | -15  | -5   | 5    | 15   | 25   | 35   | 45   | 55   |
|------------|------------------|---------|------|------|------|------|------|------|------|------|
| <b>90</b>  | Refrig. Capacity | (Btu/h) | 1265 | 1863 | 2515 | 3251 | 4101 | 5097 | 6270 | 7651 |
|            | Power Input      | (W)     | 327  | 349  | 372  | 393  | 411  | 423  | 427  | 422  |
|            | Amps             | (A)     | 2.58 | 2.63 | 2.68 | 2.74 | 2.81 | 2.87 | 2.93 | 2.98 |
| <b>105</b> | Refrig. Capacity | (Btu/h) |      | 1595 | 2194 | 2854 | 3607 | 4482 | 5510 | 6723 |
|            | Power Input      | (W)     |      | 362  | 393  | 422  | 449  | 470  | 484  | 489  |
|            | Amps             | (A)     |      | 2.59 | 2.75 | 2.89 | 3    | 3.08 | 3.13 | 3.14 |
| <b>120</b> | Refrig. Capacity | (Btu/h) |      |      | 1846 | 2433 | 3090 | 3847 | 4734 | 5782 |
|            | Power Input      | (W)     |      |      | 412  | 451  | 488  | 519  | 544  | 560  |
|            | Amps             | (A)     |      |      | 2.84 | 3.04 | 3.18 | 3.27 | 3.29 | 3.24 |
| <b>140</b> | Refrig. Capacity | (Btu/h) |      |      |      | 1850 | 2383 | 2986 | 3689 | 4521 |
|            | Power Input      | (W)     |      |      |      | 479  | 530  | 578  | 619  | 651  |
|            | Amps             | (A)     |      |      |      | 3.05 | 3.21 | 3.28 | 3.23 | 3.09 |

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### 50HZ R-449A\*

| Condensing | Evaporating      | (°F)    | -15  | -5   | 5    | 15   | 25   | 35   | 45   | 55   |
|------------|------------------|---------|------|------|------|------|------|------|------|------|
| <b>90</b>  | Refrig. Capacity | (Btu/h) | 1263 | 1861 | 2512 | 3248 | 4098 | 5093 | 6265 | 7645 |
|            | Power Input      | (W)     | 327  | 349  | 372  | 393  | 411  | 423  | 427  | 422  |
|            | Amps             | (A)     | 2.58 | 2.63 | 2.68 | 2.74 | 2.81 | 2.87 | 2.93 | 2.98 |
| <b>105</b> | Refrig. Capacity | (Btu/h) |      | 1593 | 2191 | 2851 | 3603 | 4477 | 5505 | 6717 |
|            | Power Input      | (W)     |      | 362  | 393  | 422  | 449  | 470  | 484  | 489  |
|            | Amps             | (A)     |      | 2.59 | 2.75 | 2.89 | 3    | 3.08 | 3.13 | 3.14 |
| <b>120</b> | Refrig. Capacity | (Btu/h) |      |      | 1843 | 2430 | 3086 | 3842 | 4728 | 5775 |
|            | Power Input      | (W)     |      |      | 412  | 451  | 488  | 519  | 544  | 560  |
|            | Amps             | (A)     |      |      | 2.84 | 3.04 | 3.18 | 3.27 | 3.29 | 3.24 |
| <b>140</b> | Refrig. Capacity | (Btu/h) |      |      |      | 1846 | 2378 | 2981 | 3682 | 4513 |
|            | Power Input      | (W)     |      |      |      | 479  | 530  | 578  | 619  | 651  |
|            | Amps             | (A)     |      |      |      | 3.05 | 3.21 | 3.28 | 3.23 | 3.09 |

\* Due to very high discharge temperature especially on LBP conditions, please strictly refer to Tecumseh Guidelines & Marketing Bulletin when using this refrigerant.