

Technical Documentation

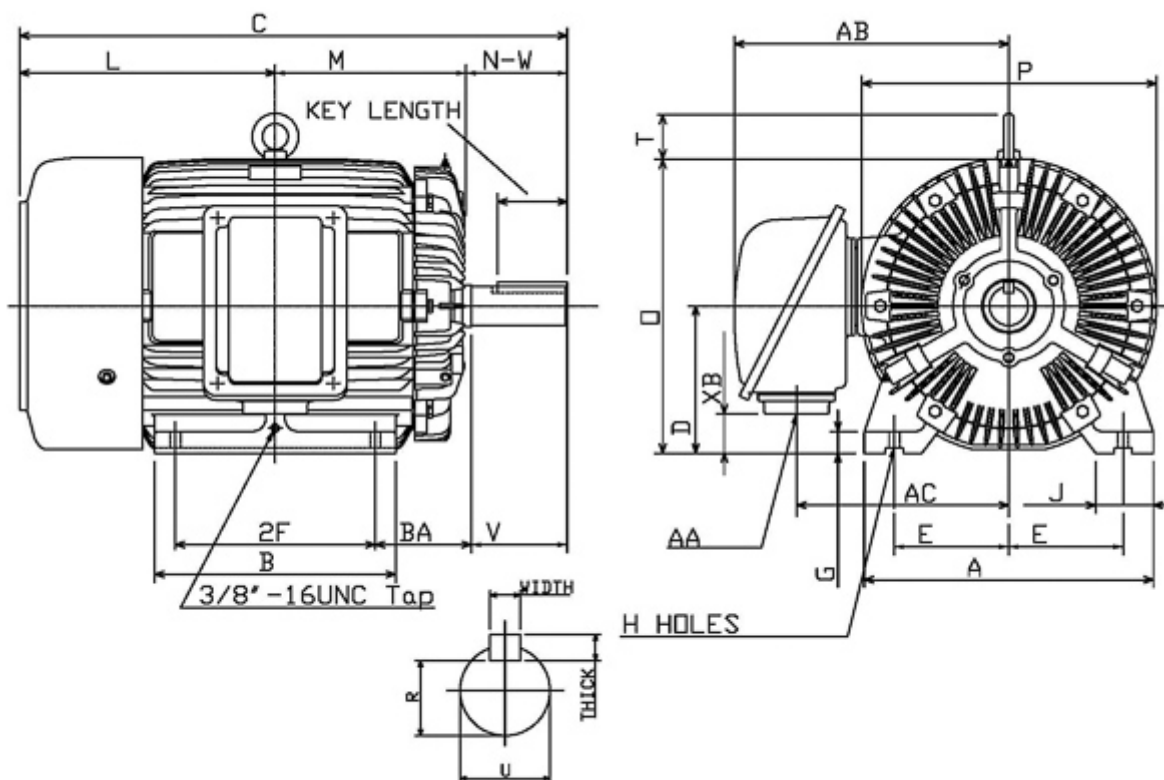
# **APH0208**

## **Advantage Plus IEEE Ready | AEHH8R**


Date: June 25, 2020

### Dimensional Drawing

| Catalogue | Model  | HP | Pole | kW | Rating     | Voltage | Hz | RPM |
|-----------|--------|----|------|----|------------|---------|----|-----|
| APH0208   | AEHH8R | 20 | 8    | 15 | Continuous | 460     | 60 | 900 |



| Frame Size       | Mounting |      |          |         |                    | A           | B          | C     | CD                           | D          |         |
|------------------|----------|------|----------|---------|--------------------|-------------|------------|-------|------------------------------|------------|---------|
|                  | E        | 2F   | 2F2      | H       | BA                 |             |            |       |                              |            |         |
| 324T             | 6.25     | 10.5 |          | 0.66    | 5.25               | 15.75       | 12.8       | 29.93 |                              | 8          |         |
| G                | J        | K    | L        | M       | O                  | P           | T          | Key   |                              |            | Keyseat |
| 1.1              | 3.15     |      | 14.18    | 10.1    | 16.22              | 16.55       | 2.36       | Width | Thick                        | Length     | R       |
|                  |          |      |          |         |                    |             |            | 0.5   | 0.5                          | 3.91       | 1.845   |
| Terminal Housing |          |      | Aux Box  |         |                    | C/D Flange  |            |       |                              |            |         |
| AA               | AB       | AC   | XB       | AE      | AX                 | BB          | AH         | AK    | BD                           | AJ         | BF      |
| NPT2"            | 14.72    | 11.3 | 3.59     |         |                    |             |            |       |                              |            |         |
| Shaft Extension  |          |      | Bearings |         | Approx. Weight Lbs | SPL dBA/3ft | Ins. Class | S.F.  | Drive Method                 | Dimensions |         |
| N-W              | U        | V    | DE       | NDE     |                    |             |            |       |                              |            |         |
| 5.25             | 2.125    | 5.15 | 6312ZC3  | 6212ZC3 | 664                | 65          | F          | 1.15  | Direct Coupling / Belt Drive | Inches     |         |

|   |                     |
|---|---------------------|
| <br>MOTORS (CANADA) INC. |                     |
|   |                     |
|   | Date: June 25, 2020 |

### Technical Data Sheet

|                    |                       |
|--------------------|-----------------------|
| Motor Type: AEHH8R | Catalogue No: APH0208 |
|--------------------|-----------------------|

#### Nameplate Information

|           |            |                |             |             |              |                |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
| 20        | 8          | 875            | 324T        | 460         | 60           | 3              |
| Enclosure | Ins. Class | Service Factor | Time Rating | NEMA Design | Rated Amb.   | Rated Altitude |
| TEFC      | F          | 1.15           | Continuous  | B           | -40 to 40 °C | <1000 m        |

#### Typical Performance

| Efficiency (%)    |                             |                                 |                                      | Power Factor (%)    |           |                                |
|-------------------|-----------------------------|---------------------------------|--------------------------------------|---------------------|-----------|--------------------------------|
| Full Load         |                             | 3/4 Load                        | 1/2 Load                             | Full Load           | 3/4 Load  | 1/2 Load                       |
| Nom.              | Min.                        |                                 |                                      |                     |           |                                |
| 90.2              | 88.5                        | 91.0                            | 91.0                                 | 81.0                | 76.0      | 67.0                           |
| Torque            |                             |                                 |                                      | Current (A)         |           |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load | Locked Rotor                   |
| 120.00            | 200                         | 170                             | 210                                  | 10.6                | 25.6      | 145                            |
| NEMA KVA Code     | Inertia (WR <sup>2</sup> )  |                                 |                                      | Safe Stall Time (s) |           | Noise Level Sound Press. dB(A) |
|                   | Rotor (lb-ft <sup>2</sup> ) | NEMA Load (lb-ft <sup>2</sup> ) | Max. Allowable (lb-ft <sup>2</sup> ) | Cold                | Hot       |                                |
| G                 | 10.393                      | 525.00                          | 1001.00                              | 36                  | 25        | 65                             |

#### VFD Duty Information

| Speed Range     |                 |                | VFD     |              | S.F.     |
|-----------------|-----------------|----------------|---------|--------------|----------|
| Constant Torque | Variable Torque | Constant Power | Carrier | Type         |          |
| 6-60Hz          | 3-60Hz          | 60-120Hz       | ≤ 5 kHz | VPWM or CPWM | 1.0 Only |

#### Hazardous Locations Information

|  |           |
|--|-----------|
| CSA Certified  |           |
| Class I, Div 2, Groups B, C & D<br>Class I, Zone 2, Groups IIB+H2, IIB & IIA |           |
| Temp Code (Sinewave / VFD)   | T3C / T3A |

#### Additional Certifications

|                               |
|-------------------------------|
| Other Certification           |
| Class II, Div 2, Groups F & G |

#### Additional Information

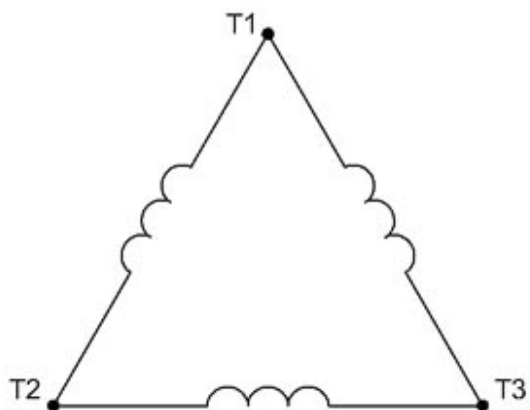
| Bearings |         | Approx. Weight |
|----------|---------|----------------|
| DE       | NDE     | lbs            |
| 6312ZC3  | 6212ZC3 | 664            |

**Nameplate Drawing**

# Advantage Plus IEEE Ready

|              |                   |        |                |         |                |      |
|--------------|-------------------|--------|----------------|---------|----------------|------|
| TYPE         | AEHH8R            |        | CAT. NO.       | APH0208 |                |      |
| OUTPUT       | 20 HP 15 kW       |        | FRAME          | 324T    | TEFC           |      |
| R.P.M.       | 875               |        | POLE           | 8       | INS.           | F    |
| VOLTS        | 460               |        | PHASE          | 3       | Hz             | 60   |
| AMPS         | 25.6              |        | CODE           | G       | S.F.           | 1.15 |
| AMBIENT      | 40 °C             |        | NOM. EFF. 90.2 |         | MIN. EFF. 88.5 |      |
| BEARINGS     | 6312ZC3 / 6212ZC3 |        |                |         | RATING Cont.   |      |
| SER. NO.     | TBD               |        | DESIGN         | B       | WT. 664 LBS    |      |
| PWM VFD DUTY | VT                | CT     | CP             |         | S.F.           |      |
|              | 3-60Hz            | 6-60Hz | 60-120Hz       |         | 1.0 Only       |      |

**Connection Diagram**

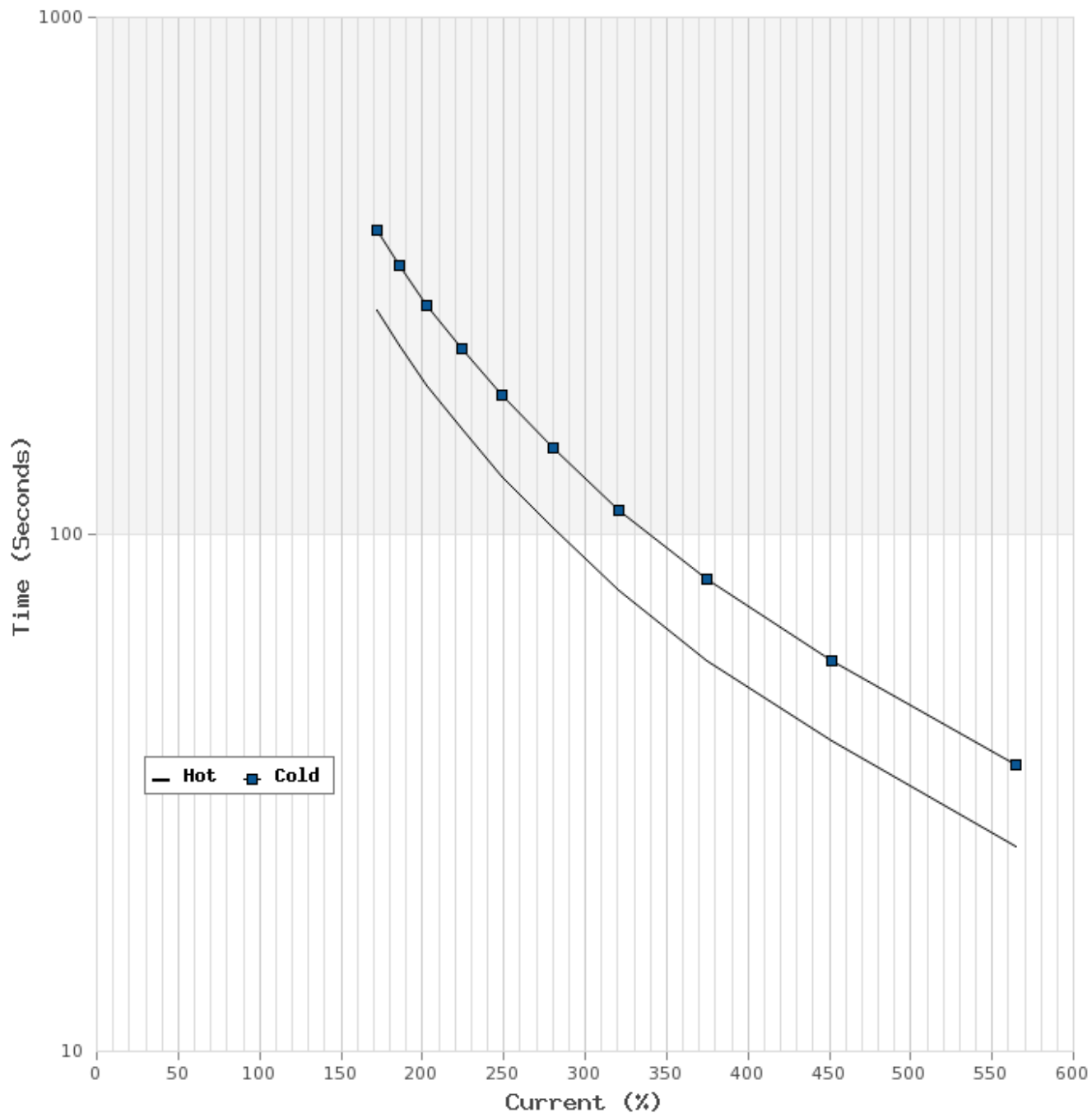


| 3 LEAD  |       | SINGLE VOLTAGE |    |    | DELTA |
|---------|-------|----------------|----|----|-------|
| VOLTAGE | CONN. | L1             | L2 | L3 |       |
| -       | DELTA | 1              | 2  | 3  |       |

WD\_3D

### Thermal Limit Curves

|                    |           |                       |      |                                   |        |
|--------------------|-----------|-----------------------|------|-----------------------------------|--------|
| Motor Type: AEHH8R |           | Catalogue No: APH0208 |      | Family: Advantage Plus IEEE Ready |        |
| HP                 | 20        | Safe Stall Time       |      | Full Load A                       | 25.6 A |
| Voltage            | 460V 60Hz | Hot                   | 25 s | % Inrush                          | 566 %  |
| RPM                | 900       | Cold                  | 36 s | Locked Rotor A                    | 145 A  |



**T-N and I-N Curves**

|                    |           |                       |              |                                   |         |
|--------------------|-----------|-----------------------|--------------|-----------------------------------|---------|
| Motor Type: AEHH8R |           | Catalogue No: APH0208 |              | Family: Advantage Plus IEEE Ready |         |
| HP                 | 20        | Full Load T           | 120.00 lb-ft | Full Load A                       | 25.6 A  |
| Voltage            | 460V 60Hz | Locked Rotor T        | 200 %        | Locked Rotor A                    | 145.0 A |
| RPM                | 900       | Pull Up T             | 170 %        | Break Down T                      | 210 %   |

