

# XA310A-D1-100 Technical Specifications

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## 1 . Specifications

|                                                 |                                          |                                  |       |
|-------------------------------------------------|------------------------------------------|----------------------------------|-------|
| Model                                           | XA310A-D1-100                            | Power                            | 10HP  |
| Displacement(m <sup>3</sup> /h)                 | 35.4                                     | Refrigerant                      | R22   |
| Cooling Cap.(W) <sup>(a)</sup>                  | 37083                                    | Input Power(W) <sup>(a)</sup>    | 10674 |
| Rated Load Amps(A) <sup>(a)</sup>               | 33.0                                     | COP <sup>(a)</sup>               | 3.47  |
| Max. Vibration(mm) <sup>(a)</sup>               | <0.10                                    | Sound Level (dBA) <sup>(a)</sup> | 78    |
| Test Power Source <sup>(a)</sup>                | 60Hz-220V                                | Rated Speed (RPM) <sup>(a)</sup> | 3500  |
| Max. Moisture (mg)                              | < 500                                    | Max. Impurity (mg)               | < 100 |
| Oil Circulation (%) <sup>(a)</sup>              | <1%                                      | Weight (kg, With Oil)            | 55.8  |
| Electrical Specification                        | Power Source                             | 208V-230V/3Ph/60Hz               |       |
|                                                 | Run Capacitor                            | \                                |       |
|                                                 | Min. Operation Voltage(V) <sup>(b)</sup> | 187                              |       |
|                                                 | Max. Operation Voltage(V)                | 253                              |       |
|                                                 | Min. Starting Voltage(V) <sup>(c)</sup>  | 177                              |       |
|                                                 | Lock Rotor Amps(A)                       | 234.00                           |       |
|                                                 | Max. Operation Current <sup>(d)</sup>    | 47.8 (A)                         |       |
|                                                 | Motor Insulation Temp.(°C)               | 130                              |       |
| Terminal Resistance<br>(Ω) ( ± 10%)<br>At 25 °C | T1(C)-T2(S)                              | 0.26                             |       |
|                                                 | T2(S)-T3(R)                              | 0.26                             |       |
|                                                 | T3(R)-T1(C)                              | 0.26                             |       |
| Lubrication                                     | Oil Type                                 | 3GS(32cSt)                       |       |
|                                                 | Initial Charge(L)                        | 3.5                              |       |
|                                                 | Recharge(L)                              | 3                                |       |
| Electrical Safety                               | Insulation Voltage(V)                    | 2500                             |       |
|                                                 | Leakage Current(mA)                      | ≤5                               |       |
|                                                 | Insulation Resistance(MΩ)                | >20                              |       |
|                                                 | Ground Resistance(Ω)                     | <0.1                             |       |
| Max. Operation<br>Pressure                      | High Side(MPa)                           | 3.0                              |       |
|                                                 | Low Side(MPa)                            | 2.0                              |       |

Notes:

- a) Test Condition: Based On Test Power Voltage, First Rated Condition;
- b) Test Condition: ET 13°C, CT 65°C, SH 11.1K
- c) Test Condition: Discharge/Suction Pressure Set To Refrigeration Saturation Pressure At 40°C.
- d) Test Condition: ET 13°C, CT 65°C, SH11.1K, 90% Min. Rated Voltage;

## 2 . Configuration

| Suction/Discharge | Injection | Sight Glass | Thermal Tube |
|-------------------|-----------|-------------|--------------|
| Welded Fittings   | NONE      | NONE        | NONE         |

### 3 . Attachments

| Name                 | Part Number | Description                    | Qty. |
|----------------------|-------------|--------------------------------|------|
| Screws               | 100-0006-00 | Flange Screw,<br>M5x8,GB/T5789 | 7    |
| Mount Ground         | 200-0001-00 |                                | 4    |
| Mount Sleeve         | 019-0002-00 |                                | 4    |
| Terminal Cover       | 017-0002-00 |                                | 1    |
| Terminal Fence       | 017-0001-00 |                                | 1    |
| Terminal Cover Seal  | 009-0025-00 |                                | 1    |
| Fusite Seal          | 009-0023-00 |                                | 1    |
| DTC Valve            |             |                                | NONE |
| DTC Seal             |             |                                | NONE |
| Suction Valve Seal   |             |                                | NONE |
| Discharge Valve Seal |             |                                | NONE |

### 4 . First Test Condition (°C)

Cooling Cap. and COP No Less Than **95%** of Nominal Value, Power and Current No More Than 105% of Nominal Value (Performance And Sound Power Need 24hrs Break In At High Load Running Condition)。

| Item | Parameter         | Value |
|------|-------------------|-------|
| 1    | Evaporating Temp. | 7.2   |
| 2    | Condensing Temp.  | 54.4  |
| 3    | Ambient Temp.     | 35.0  |
| 4    | Super Heat        | 11.1  |
| 5    | Sub Cooling       | 8.3   |

### 5 . Internal Protection Parts

- a) Internal Motor Protector;
- b) Internal Pressure Release Valve, Open Range (Pressure Difference Between Discharge And Suction) : 2.76--3.10Mpa

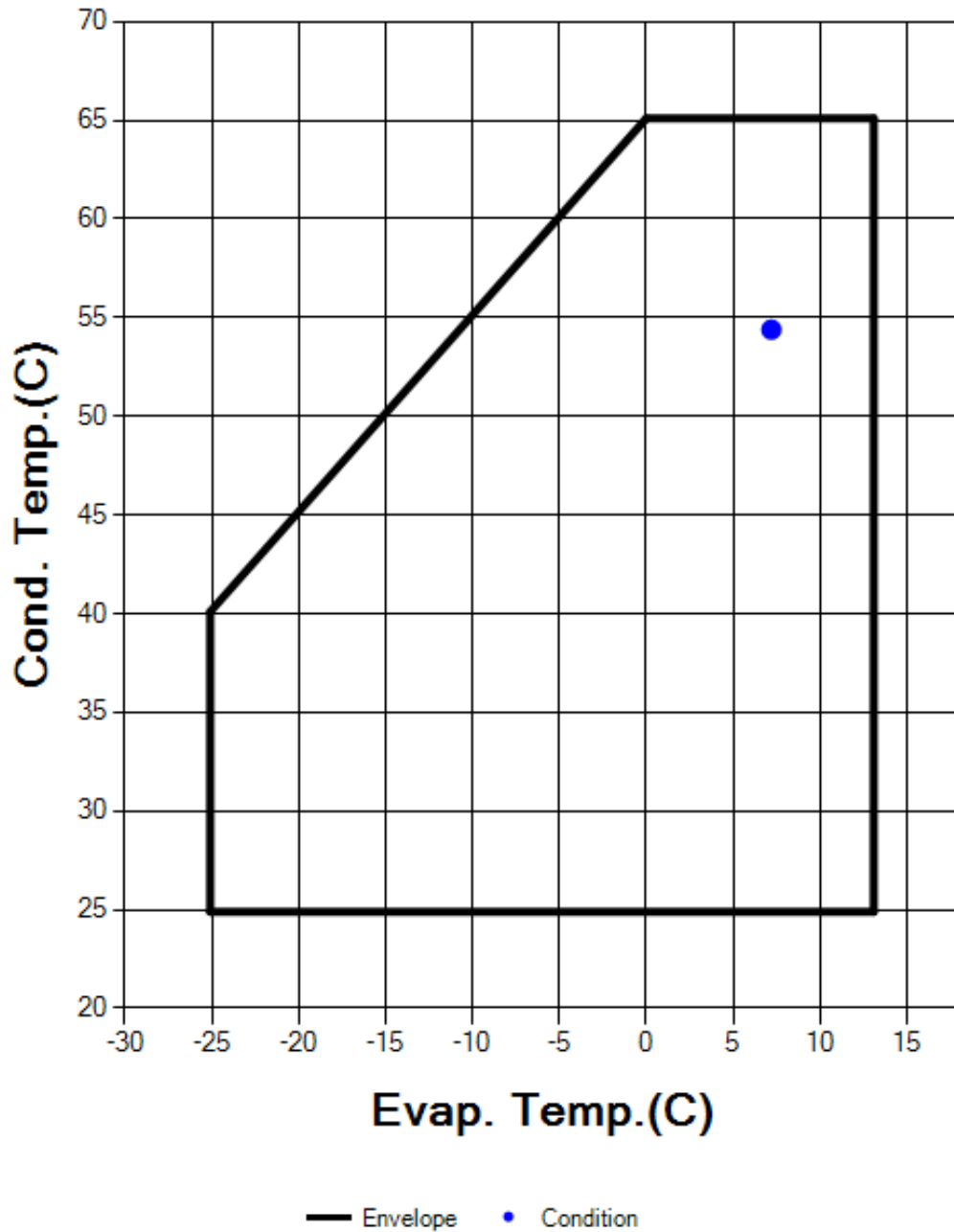
## 6. Performance Data

| kW              | Temp.<br>Cond.(°C) | Temp. Evap. (°C) |       |       |       |       |       |       |       |       |
|-----------------|--------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                 |                    | -25              | -20   | -15   | -10   | -5    | 0     | 5     | 10    | 13    |
| Cooling<br>Cap. | 65                 |                  |       |       |       |       | 24.73 | 29.92 | 35.82 | 39.77 |
|                 | 60                 |                  |       |       |       | 21.78 | 26.58 | 32.05 | 38.27 | 42.44 |
|                 | 55                 |                  |       |       | 18.89 | 23.31 | 28.34 | 34.07 | 40.59 | 44.96 |
|                 | 50                 |                  |       | 16.12 | 20.16 | 24.77 | 30.02 | 35.98 | 42.79 | 47.35 |
|                 | 45                 |                  | 13.52 | 17.17 | 21.37 | 26.16 | 31.61 | 37.80 | 44.87 | 49.61 |
|                 | 40                 | 11.12            | 14.39 | 18.18 | 22.53 | 27.48 | 33.12 | 39.53 | 46.85 | 51.77 |
|                 | 35                 | 11.84            | 15.23 | 19.15 | 23.64 | 28.76 | 34.57 | 41.19 | 48.76 | 53.84 |
|                 | 30                 | 12.55            | 16.05 | 20.10 | 24.73 | 29.99 | 35.97 | 42.79 | 50.60 | 55.85 |
| 25              | 13.25              | 16.86            | 21.03 | 25.78 | 31.20 | 37.35 | 44.36 | 52.40 | 57.82 |       |
| Input<br>Power  | 65                 |                  |       |       |       |       | 13.43 | 13.42 | 13.44 | 13.47 |
|                 | 60                 |                  |       |       |       | 12.00 | 12.00 | 12.02 | 12.06 | 12.10 |
|                 | 55                 |                  |       |       | 10.70 | 10.73 | 10.76 | 10.79 | 10.85 | 10.90 |
|                 | 50                 |                  |       | 9.49  | 9.57  | 9.62  | 9.66  | 9.71  | 9.78  | 9.85  |
|                 | 45                 |                  | 8.35  | 8.49  | 8.59  | 8.65  | 8.71  | 8.77  | 8.85  | 8.92  |
|                 | 40                 | 7.24             | 7.46  | 7.61  | 7.72  | 7.80  | 7.87  | 7.94  | 8.03  | 8.11  |
|                 | 35                 | 6.45             | 6.68  | 6.84  | 6.96  | 7.05  | 7.12  | 7.20  | 7.30  | 7.38  |
|                 | 30                 | 5.74             | 5.98  | 6.15  | 6.28  | 6.37  | 6.45  | 6.53  | 6.64  | 6.72  |
| 25              | 5.10               | 5.35             | 5.53  | 5.66  | 5.75  | 5.84  | 5.92  | 6.03  | 6.11  |       |

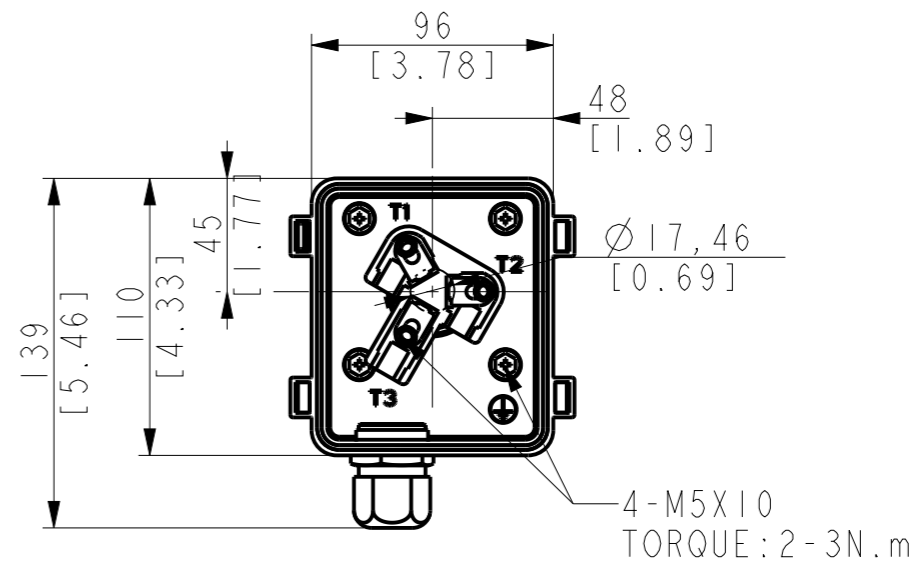
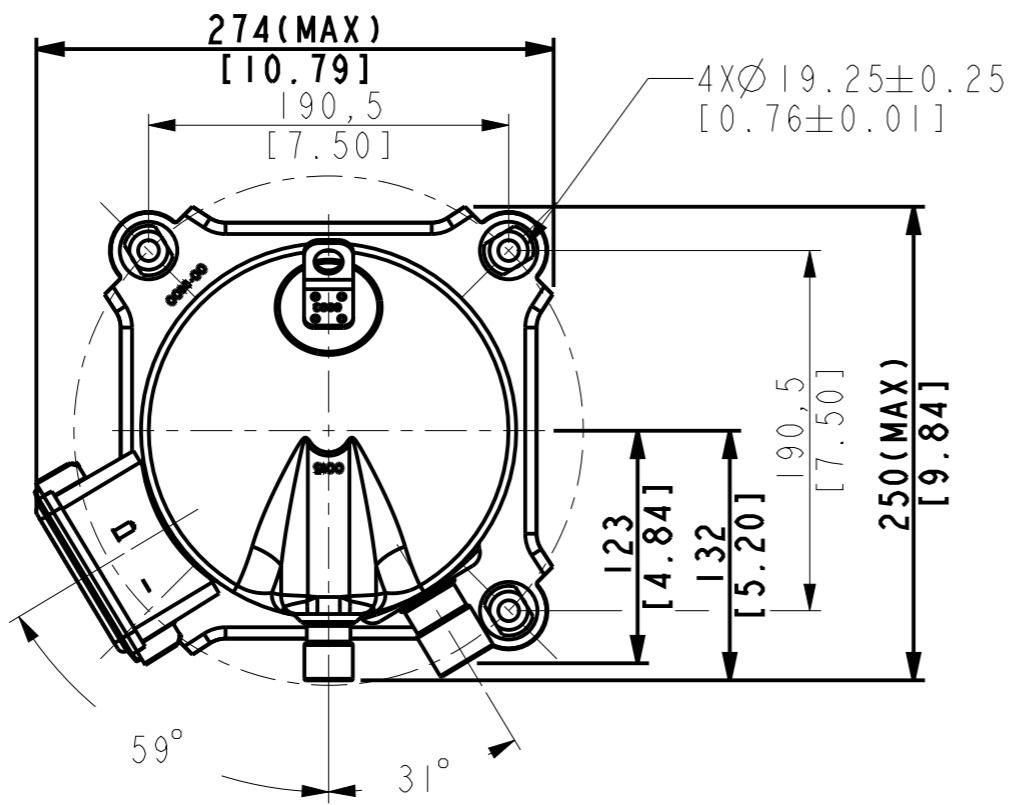
Notes: Capacity Calculation Based On SH=11.1K,SC=8.3K

## 7. Application Envelope

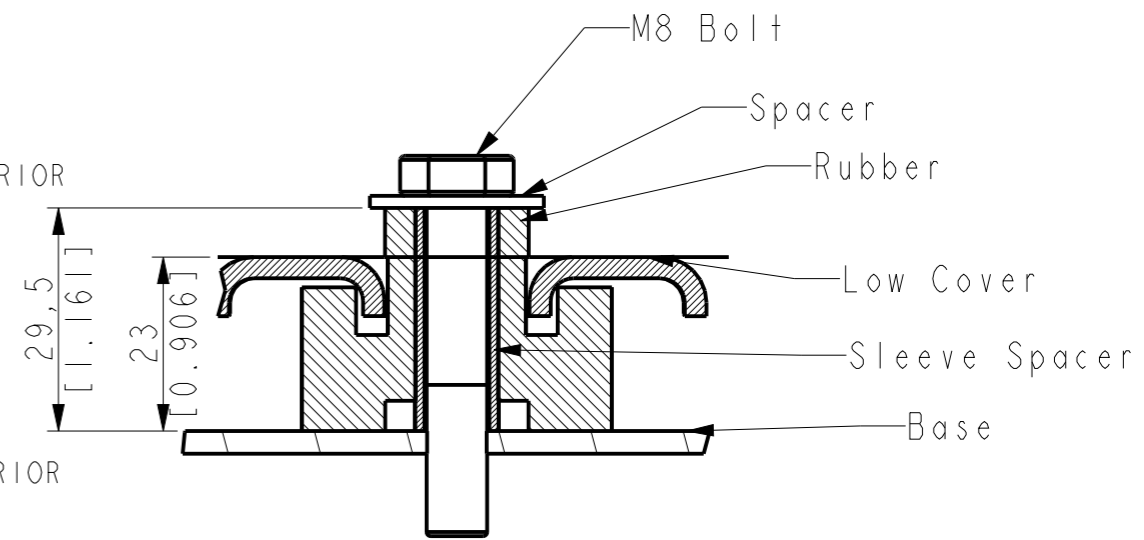
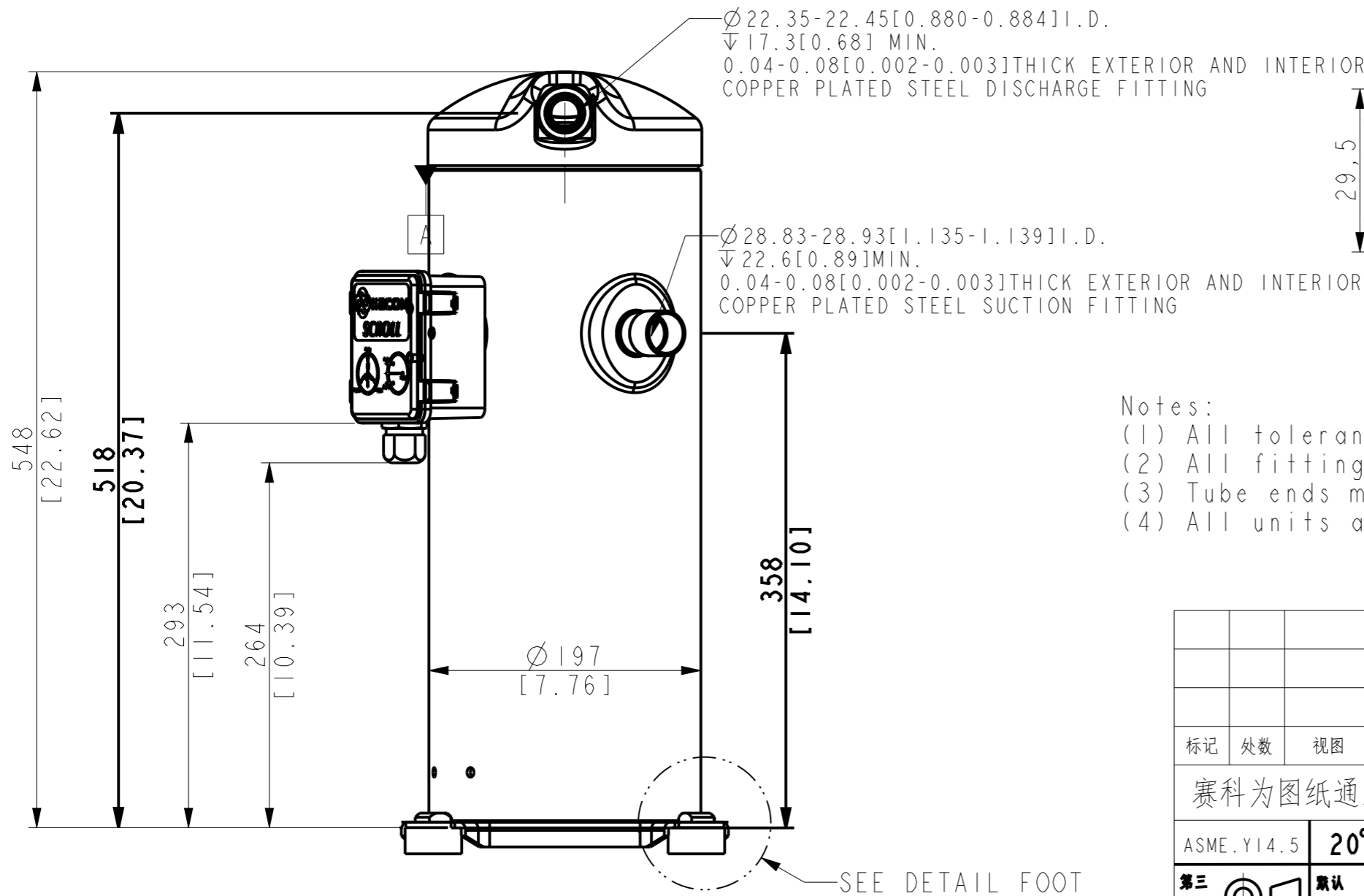
**Envelope  
XA310A-D1-100**



## 8. Drawing



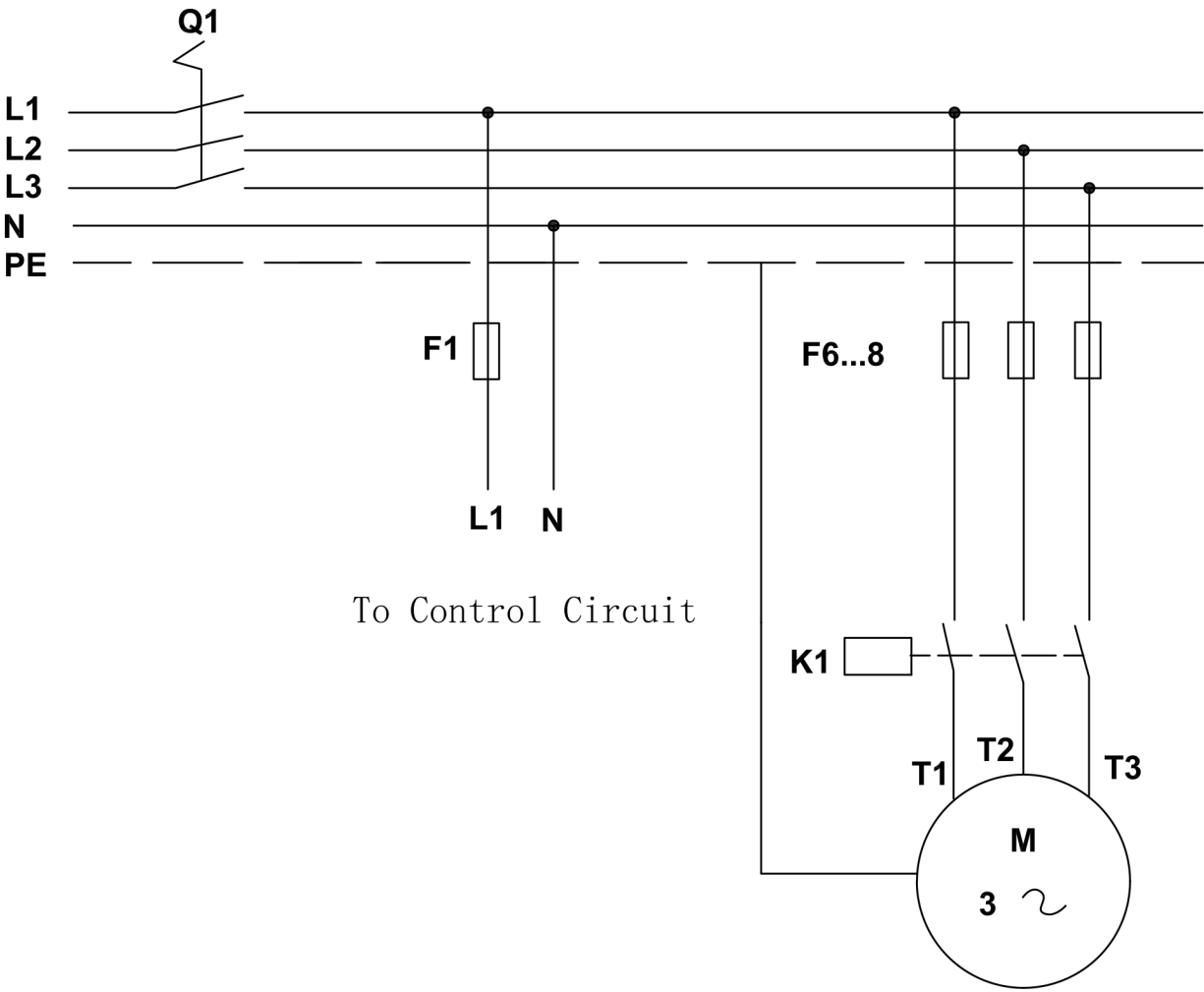
TERMINAL BOX LAYOUT  
SCALE 1:3



DETAIL FOOT

- Notes:
- (1) All tolerances 1.5mm [0.06in] unless otherwise specified
  - (2) All fittings: + 3.0mm 0.12in
  - (3) Tube ends must be plugged
  - (4) All units are in mmlinch]

|            |      |    |                                               |    |             |                                                 |               |       |    |
|------------|------|----|-----------------------------------------------|----|-------------|-------------------------------------------------|---------------|-------|----|
|            |      |    |                                               |    |             | 常州赛科为能源科技有限公司<br>Xecom Energy Technologies Ltd. |               |       |    |
| 标记         | 处数   | 视图 | ECN代码                                         | 签字 | 日期          |                                                 |               |       |    |
| 赛科为图纸通用标准  |      |    |                                               |    |             | 绘图                                              | 版本标记          | 重量    | 比例 |
| ASME.Y14.5 |      |    |                                               |    |             | 20°C测量                                          | 0             | 0,333 |    |
| 第三视角       | 默认公差 |    | X ±0.4<br>X.X ±0.15<br>X.XX ±0.15<br>数值: ±0.5 | 批准 | 共 1 张 第 1 张 |                                                 | 801-0003-00EN |       |    |



Electrical Schematics

L1/L2/L3/N/PE: 3 Phase Lines(line/neutral/ground)

- Q1: Manual Switch
- F1/F6...8: Fuse
- K1: Compressor Contactor
- M: Compressor Motor
- T1/T2/T3: Compressor Terminal



# General System Schematic

