

DATA SHEET

MODEL : GVY75AA  
E.R. 10279.1

2011年版  
EDITION

第二版  
SEC. EDITION

生产文件  
PRODUCTION DOC.

2011年5月30日

|                               |                           |                                     |                     |
|-------------------------------|---------------------------|-------------------------------------|---------------------|
| Edited<br><u>Zhao Xiuling</u> | Checked<br><u>Wang Yi</u> | Approved<br><u>Edoardo biscaldi</u> | Edition<br><u>1</u> |
|-------------------------------|---------------------------|-------------------------------------|---------------------|

## 1. BASIC DATA

### 1.1 OPERATION:

|  |                 |
|--|-----------------|
| Application:   | LBP             |
| Refrigerant:   | R134a           |
| Expansion device:                                    | Capillary tube  |
| Cooling:   | Static          |
| Evaporating Temperature Range:                       | -35 to -10°C    |
| Max Ambient Temperature:                             | 43°C ( 110°F )  |
| Max Operating Discharge Temperature <sup>(1)</sup> : | 120°C ( 248°F ) |
| Max Peak Discharge Temperature <sup>(1, 2)</sup> :   | 135°C ( 275°F ) |
| Max Operating Condensing Temperature:                | 60°C ( 140°F )  |
| Max Peak Condensing Temperature <sup>(2)</sup> :     | 70°C ( 158°F )  |
| Max Winding Temperature:                             | 130°C ( 266°F ) |
| Max Impurities:                                      | 30 mg           |
| Max Water Content:                                   | 100 mg          |

### 1.2 COMPRESSOR

|                                |                            |
|--------------------------------|----------------------------|
| Displacement:                  | 7.5 cc                     |
| Cylinder Bore:                 | 23.6 mm                    |
| Stroke:                        | 17.2 mm                    |
| Net Weight <sup>(3)</sup> :    | 9.7 Kg                     |
| Shell size:                    | High( See Outline drawing) |
| Oil charge:                    | 230 cc                     |
| Oil Type:                      | RL 9 EB                    |
| Oil viscosity <sup>(4)</sup> : | 9 cSt                      |
| Suction system:                | Semi-direct                |

### 1.3 MOTOR

|   |               |
|---|---------------|
| Power supply:   | 220--240 V    |
| Voltage limits:   | 187 - 264 V   |
| Frequency:  | 50 Hz         |
| Phase:  | 1             |
| Motor Type:   | RSIR/RSCR     |
| Electrical Insulation Class:                                | B             |
| Locked Rotor Current at 220 V- Max value with RC(4uF/6uF):  | 13.1A / 12.8A |
| Locked Rotor Current at 220 V- Max value without RC:        | 15.15A        |
| Locked Rotor Current at 220 V- After 4 s with RC(4uF/6uF):: | 7.1A / 7.0A   |
| Locked Rotor Current at 220 V- After 4 s without RC:        | 7.3A          |
| Main Winding Resistance at 20°C ( 68°F ):                   | 12.7 Ω        |
| Start Winding Resistance at 20°C ( 68°F ):                  | 12.5 Ω        |

*(1) Measured at 5 cm from the shell with insulated termocouples*

*(2) For transient conditions during "Pull Down"*

*(3) With oil and without external electricals*

*(4) Measured at 40°C ( 104°F )*

## 1.4 ELECTRICALS

### Motor-protector

| Manufacturer:         | ELECTRICA     |                  | SENSATA       | WANBAO        |
|-----------------------|---------------|------------------|---------------|---------------|
| Type:                 | T0502/XX      | T0490/XX         | C2-308 NFBYY  | B86-120x      |
| Open Temperature°C:   | 125-135       | 125-135          | 115-125       | 115-125       |
| Close Temperature°C:  | 70-52         | 70-52            | 70-52         | 70-52         |
| U.T.C. at A:          | 2.34 (70°C)   | 2.67 (at 70°C)   | 2.36(71°C)    | 2.10 (70°C)   |
| Time Check Current A: | 9.0 (7.5-14s) | 9.4 (7.5-14 sec) | 11 (5-15 sec) | 8.6 (7.5-14s) |
| Max Current A:        | 17            | 18               | 23            | 17            |

### PTC starting device

|                           |   |   |  |
|---------------------------|---|---|--|
| Assembly type             | ZEM2 or K100                            |   |  |
| PTC Pill:                 | Siemens                                 | Murata                                  |  |
|                           | A196                                    | PTH 422B111AR120Q351P                   |  |
| Resistance at 25°C, 100V: | 11-19 Ohm                               | 9-16 Ohm                                |  |
| V max:                    | 350 V                                   | 350 V                                   |  |
| I max:                    | 8 A                                     | 8 A                                     |  |
| Curie temp.               | 120°C                                   | 120°C                                   |  |
| Dimensions:               | 20 mm (diameter),<br>3.2 mm (thickness) | 20 mm (diameter),<br>3.3 mm (thickness) |  |

### Run capacitor (optional)

|               |                          |
|---------------|--------------------------|
| Type          | plastic or metallic case |
| Capaciy       | 4 $\mu$ F or 6 $\mu$ F   |
| Vmax          | 450V                     |
| Working hours | 10000h                   |

### Connecting-board

|              |               |
|--------------|---------------|
| Type         | ZEM2 or ECC   |
| Fast-on size | 4.8 or 6.3 mm |

## 2. CALORIMETER DATA

| 2.1 Calorimeter test<br>with Capacitor | Evaporating Temperature °C) |       |      |
|--|-----------------------------|-------|------|
|  | -30                         | -23.3 | -10  |
| Cooling Capacity (W)                   | 127                         | 214   | 449  |
| Input Power (W)                        | 120                         | 146   | 218  |
| COP (W/W)                              | 1.06                        | 1.47  | 2.06 |
| Current (A)                            | 0.71                        | 0.75  | 0.92 |

  

| 2.1 Calorimeter test<br>without Capacitor | Evaporating Temperature °C) |       |      |
|---|-----------------------------|-------|------|
|   | -30                         | -23.3 | -10  |
| Cooling Capacity (W)                      | 126                         | 212   | 445  |
| Input Power (W)                           | 129                         | 157   | 234  |
| COP (W/W)                                 | 0.98                        | 1.35  | 1.90 |
| Current (A)                               | 1.02                        | 1.07  | 1.31 |

Test conditions according to ASHRAE:

|                           |       |                   |                |
|---------------------------|-------|-------------------|----------------|
| Condensing temperature:   | +55°C | Cooling:          | Static cooling |
| Subcooling temperature:   | +32°C | Supply Voltage:   | 220 V          |
| Superheating temperature: | +32°C | Supply Frequency: | 50 Hz          |
| Suction temperature:      | +32°C | Run capacitor     | 6 $\mu$ F      |
| Room temperature:         | +32°C |                   |                |

### 3. OTHER PERFORMANCES

| 3.1 Starting test<br>with / Without Capacitor | Motor Temp. / Equalized Press. |                  |
|---|--------------------------------|------------------|
|   | 90°C / 5 Bar A                 | 43°C / 6.5 Bar A |
| Min. Starting Voltage (V)                     |                                | 168 / 173        |

According to ACC-CQ-PRO-99016.D

| 3.2 Acoustic test          | -25/+55°C | -20/+50°C | -23.3/+40°C |
|----------------------------|-----------|-----------|-------------|
|                            | ISO3745   | GB9098    | USA STD     |
| A-weighted SPL (dBA)       |           | 42.0      |             |
| Vibration Level (dB)       |           |           |             |
| Vibration Index TVI (mm/s) |           | 0.4       |             |
| Gas pulse level TPI (mBar) |           |           |             |

| 3.3 Life test | Wear<br>500 h | High Temp.<br>2000 h | On Off<br>500 KCycles |
|---------------|---------------|----------------------|-----------------------|
| Test Results  | NA            | NA                   | NA                    |

Wear Test according to CECOMAF GT4003

High Temperature Test according to CECOMAF GT4002

On Off Test according to CECOMAF GT4004

| 3.4 Transport test | 2 h - 0,75 m/s <sup>2</sup> |            |             |
|--------------------|-----------------------------|------------|-------------|
|                    | x - 3.25 Hz                 | y - 7.5 Hz | z - 11.5 Hz |
| Test Results       |                             | NA         |             |

According to GB / T4857.10-92

| 3.5 oil transport test | Oil flow<br>(g/h) |
|------------------------|-------------------|
|                        | Test Results      |
|                        | NA                |

According to ACC-CQ-ES-99002.D

| 3.5 Impact test |    |
|-----------------|----|
| Test Results    | NA |

According to ECC-CQ-W-01042

**Technical Drawing of Outline Compressor**

**Front view Scale: 1:2**

**Top view Scale: 1:2**

**Bottom view Scale: 1:2**

**Section view A-A Scale: 1:1**

**Section view B-B Scale: 1:1**

**Section view C-C Scale: 1:1**

| TYPE OF SHELL | F <sup>±0.4</sup> | G <sup>±0.4</sup> | H <sup>+1<br/>0</sup> | A <sup>±2.5</sup> | B <sup>±2.5</sup> | C <sup>±2.5</sup> | D <sup>±2.5</sup> | E    |       |
|---------------|-------------------|-------------------|-----------------------|-------------------|-------------------|-------------------|-------------------|------|-------|
|               |                   |                   |                       |                   |                   |                   |                   | R600 | R134a |
| MINI          | 51                | 39.3              | 23                    | 88.5              | 89.5              | 103.5             | 163.5             | 15   | 15    |
| MEDIUM        | 51                | 39.3              | 23                    | 99                | 101               | 115               | 174               | 15   | 20    |
| MEDIUM_NS     | 55                | 43.3              | 27                    |                   |                   |                   |                   | 19   | 24    |
| HIGH          | 51                | 39.3              | 23                    | 109               | 111               | 125               | 184               | 20   | 30    |
| HIGH_NS       | 55                | 43.3              | 27                    |                   |                   |                   |                   | 24   | 34    |
| SUPPER        | 51                | 39.3              | 23                    | 119               | 121               | 135               | 194               | 30   | 30    |

**General Information:**

- COMPRESSORS**
- SAFETY - LIGHT DIMENSION**
- TOLERANCE**: ±0.1 / ±0.2
- GENERAL TOLERANCE**: ISO 2768 mS
- FINISHING**: 1508015 / 1501101
- DESCRIPTION**: OUTLINE COMPRESSOR
- REVISION**: 01 Update Drawing
- DRAWN BY**: WONG ZHI
- CHECKED BY**: YIP ZHI
- APPROVED BY**: YIP ZHI
- DATE**: 2009-2-25
- STATUS**: RELEASED
- CODE**: C708300102
- RELEASED**: 02