

## Single Pack FR8.5G 220-240V 50/60Hz CSIR

Single pack code number: **195B4465**

| Position | Title   | Code     | Amount |
|----------|---|----------|--------|
| 1        | Compressor FR8.5G                                       | 103G6790 | 1      |
| 2        | Starting relay  | 117U6015 | 1      |
| 3        | Starting capacitor (80 $\mu$ F 220V, 6.3mm)             | 117U5015 | 1      |
| 4        | Cord relief   | 103N1010 | 1      |
| 5        | Cover   | 103N2010 | 1      |
| 6        | Bolt joint for one compressor   M6   $\varnothing$ 16mm | 118-1917 | 1      |

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## FR8.5G Universal Compressor R134a 220-240V 50/60Hz

### General

|                       |                           |
|-----------------------|---------------------------|
| Code number           | 103G6790                  |
| Approvals             | EN 60335-2-34, UL984, CCC |
| Compressors on pallet | 80                        |

### Application

| Application                                    | LBP/HBP      | HBP        |
|--|--------------|------------|
| Frequency                                      | Hz 50        | 60         |
| Evaporating temperature                        | °C -30 to 10 | -30 to -10 |
| Voltage range                                  | V 187 - 254  | 198 - 254  |
| Max. condensing temperature continuous (short) | °C 60 (70)   | 60 (70)    |
| Max. winding temperature continuous (short)    | °C 125 (135) | 125 (135)  |

### Cooling requirements

| Frequency | Hz | 50  |                |                | 60  |     |     |
|-----------|----|-----|----------------|----------------|-----|-----|-----|
|           |    | LBP | MBP            | HBP            | LBP | MBP | HBP |
| 32°C      |    | S   | F <sub>2</sub> | F <sub>2</sub> | S   | -   | -   |
| 38°C      |    | S   | F <sub>2</sub> | F <sub>2</sub> | S   | -   | -   |
| 43°C      |    | O   | F <sub>2</sub> | F <sub>2</sub> | O   | -   | -   |

Remarks on application: HBP at 198 - 254V 50Hz only.

### Motor

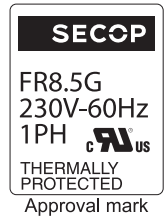
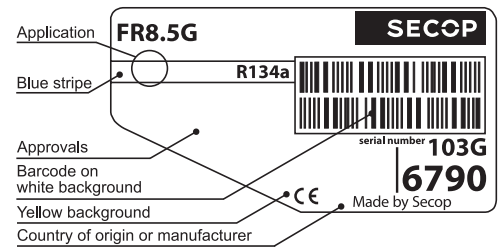
| Motor type                                | RSIR/CSIR |            |
|---|-----------|------------|
| LRA (rated after 4 sec. UL984), HST   LST | A         | 8.2   8.1  |
| Cut in Current, HST   LST                 | A         | 8.2   12.8 |
| Resistance, main   start winding (25°C)   | Ω         | 8.9   12.0 |

### Design

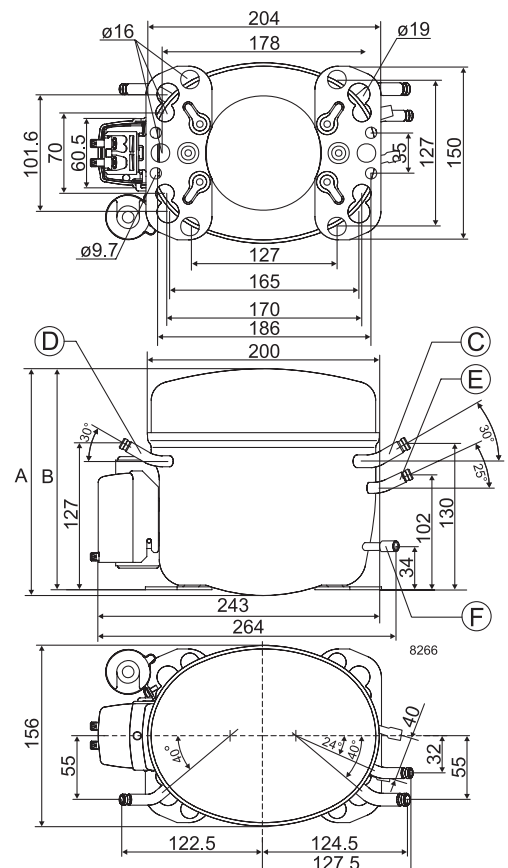
|                                     |                 |                   |
|-------------------------------------|-----------------|-------------------|
| Displacement                        | cm <sup>3</sup> | 7.95              |
| Oil quantity (type)                 | cm <sup>3</sup> | 450 (polyolester) |
| Maximum refrigerant charge          | g               | 900               |
| Free gas volume in compressor       | cm <sup>3</sup> | 1350              |
| Weight without electrical equipment | kg              | 10.6              |

### Dimensions

|                      |                          |    |                          |
|----------------------|--------------------------|----|--------------------------|
| Height               | mm                       | A  | 196                      |
|                      |                          | B  | 191                      |
|                      |                          | B1 | -                        |
|                      |                          | B2 | -                        |
| Suction connector    | location/I.D. mm   angle | C  | 8.2   30°                |
|                      | material   comment       |    | Cu-plated steel   Al cap |
| Process connector    | location/I.D. mm   angle | D  | 6.2   30°                |
|                      | material   comment       |    | Cu-plated steel   Al cap |
| Discharge connector  | location/I.D. mm   angle | E  | 6.2   25°                |
|                      | material   comment       |    | Cu-plated steel   Al cap |
| Oil cooler connector | location/I.D. mm   angle | F  | 6.2   25°                |
|                      | material   comment       |    | Cu-plated steel   Al cap |
| Connector tolerance  | I.D. mm                  |    | ±0.09                    |
| Remarks:             |                          |    |                          |



- S = Static cooling normally sufficient
- O = Oil cooling
- F<sub>1</sub> = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
- F<sub>2</sub> = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



**EN 12900 Household (CECOMAF)** 220V, 50Hz, fan cooling F<sub>2</sub>

|                    |     |     |     |      |      |       |      |      |      |      |      |      |      |      |      |    |    |
|--------------------|-----|-----|-----|------|------|-------|------|------|------|------|------|------|------|------|------|----|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10   | 15 | 20 |
| Capacity in W      |     |     |     | 84.9 | 123  | 138   | 171  | 228  | 298  | 351  | 381  | 478  | 592  | 647  | 722  |    |    |
| Power cons. in W   |     |     |     | 127  | 151  | 159   | 176  | 203  | 231  | 251  | 261  | 291  | 321  | 335  | 352  |    |    |
| Current cons. in A |     |     |     | 1.16 | 1.22 | 1.25  | 1.30 | 1.38 | 1.47 | 1.53 | 1.56 | 1.67 | 1.78 | 1.83 | 1.90 |    |    |
| COP in W/W         |     |     |     | 0.67 | 0.82 | 0.87  | 0.97 | 1.12 | 1.29 | 1.40 | 1.46 | 1.65 | 1.84 | 1.93 | 2.05 |    |    |

**EN 12900 Household (CECOMAF)** 220V, 60Hz, fan cooling F<sub>2</sub>

|                    |     |     |     |      |      |       |      |      |      |      |    |   |   |     |    |    |    |
|--------------------|-----|-----|-----|------|------|-------|------|------|------|------|----|---|---|-----|----|----|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5 | 0 | 5 | 7.2 | 10 | 15 | 20 |
| Capacity in W      |     |     |     | 92.3 | 138  | 156   | 195  | 263  | 345  |      |    |   |   |     |    |    |    |
| Power cons. in W   |     |     |     | 134  | 164  | 174   | 197  | 233  | 273  |      |    |   |   |     |    |    |    |
| Current cons. in A |     |     |     | 1.02 | 1.12 | 1.16  | 1.24 | 1.37 | 1.53 |      |    |   |   |     |    |    |    |
| COP in W/W         |     |     |     | 0.69 | 0.85 | 0.90  | 0.99 | 1.13 | 1.26 |      |    |   |   |     |    |    |    |

**ASHRAE LBP** 220V, 50Hz, fan cooling F<sub>2</sub>

|                    |     |     |     |      |      |       |      |      |      |      |      |      |      |      |      |    |    |
|--------------------|-----|-----|-----|------|------|-------|------|------|------|------|------|------|------|------|------|----|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5   | 0    | 5    | 7.2  | 10   | 15 | 20 |
| Capacity in W      |     |     |     | 105  | 152  | 171   | 211  | 282  | 368  | 434  | 471  | 592  | 734  | 803  | 898  |    |    |
| Power cons. in W   |     |     |     | 127  | 151  | 159   | 176  | 203  | 231  | 251  | 261  | 291  | 321  | 335  | 352  |    |    |
| Current cons. in A |     |     |     | 1.16 | 1.22 | 1.25  | 1.30 | 1.38 | 1.47 | 1.53 | 1.56 | 1.67 | 1.78 | 1.83 | 1.90 |    |    |
| COP in W/W         |     |     |     | 0.83 | 1.01 | 1.07  | 1.19 | 1.39 | 1.59 | 1.73 | 1.81 | 2.04 | 2.29 | 2.40 | 2.55 |    |    |

**ASHRAE LBP** 220V, 60Hz, fan cooling F<sub>2</sub>

|                    |     |     |     |      |      |       |      |      |      |      |    |   |   |     |    |    |    |
|--------------------|-----|-----|-----|------|------|-------|------|------|------|------|----|---|---|-----|----|----|----|
| Evap. temp. in °C  | -45 | -40 | -35 | -30  | -25  | -23.3 | -20  | -15  | -10  | -6.7 | -5 | 0 | 5 | 7.2 | 10 | 15 | 20 |
| Capacity in W      |     |     |     | 114  | 171  | 193   | 241  | 325  | 426  |      |    |   |   |     |    |    |    |
| Power cons. in W   |     |     |     | 134  | 164  | 174   | 197  | 233  | 273  |      |    |   |   |     |    |    |    |
| Current cons. in A |     |     |     | 1.02 | 1.12 | 1.16  | 1.24 | 1.37 | 1.53 |      |    |   |   |     |    |    |    |
| COP in W/W         |     |     |     | 0.85 | 1.04 | 1.11  | 1.22 | 1.39 | 1.56 |      |    |   |   |     |    |    |    |



| Accessories for           | FR8.5G                  | Figure | Code number |
|---------------------------|-------------------------|--------|-------------|
| PTC starting device       | 6.3 mm spade connectors | a1     | 103N0011    |
|                           | 4.8 mm spade connectors |        | 103N0018    |
| Starting relay            | 6.3 mm spade connectors | a2     | 117U6015    |
| Start. capacitor 80 µF    | 6.3 mm spade connectors | c      | 117U5015    |
| Cover                     |                         | b      | 103N2010    |
| Cord relief               |                         | d      | 103N1010    |
| Protection screen for PTC |                         | g      | 103N0476    |

| Test conditions         | EN 12900/CECOMAF | ASHRAE |
|-------------------------|------------------|--------|
| Condensing temperature  | 55°C             | 55°C   |
| Ambient temperature     | 32°C             | 32°C   |
| Suction gas temperature | 32°C             | 32°C   |
| Liquid temperature      | 55°C             | 32°C   |

| Mounting accessories     |          | Code number |
|--------------------------|----------|-------------|
| Bolt joint for one comp. | Ø: 16 mm | 118-1917    |
| Bolt joint in quantities | Ø: 16 mm | 118-1918    |
| Snap-on in quantities    | Ø: 16 mm | 118-1919    |

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