



Model: NJ2212GK  
Code: 943DA11

**embraco** POWER IN.  
CHANGE ON

|                                       |                     |
|---------------------------------------|---------------------|
| Type:                                 | On-off              |
| Voltage [V] / Frequency [Hz] / Phases | 220-240 V 50 Hz 1 ~ |
| Refrigerant:                          | R-404A              |
| Application:                          | LBP                 |

|                  |                       |
|------------------|-----------------------|
| Motor type:      | CSCR                  |
| Starting torque: | HST                   |
| HP:              | 1 1/2                 |
| Displacement:    | 34.38 cm <sup>3</sup> |

### OPERATING CONDITION : ASHRAE LBP 32

|                   |          |              |         |              |        |
|-------------------|----------|--------------|---------|--------------|--------|
| Evaporation Temp. | -23.3 °C | Return Temp. | 32.2 °C | Superheating | 55.5 K |
| Condensing Temp.  | 54.4 °C  | Liquid Temp. | 32.2 °C | Subcooling   | 22.2 K |

|                         |                          |                       |                   |
|-------------------------|--------------------------|-----------------------|-------------------|
| <b>Cooling capacity</b> | <b>Power consumption</b> | <b>Mass flow rate</b> | <b>Efficiency</b> |
| 1,530.33 W              | 1,141.59 W               | 35.55 kg/h            | 1.34 W/W          |

### APPLICATION

|  |                                   |                            |             |
|--|-----------------------------------|----------------------------|-------------|
| Evaporating temperature range:           | -40 to -10 °C                     | Cooling type:              | Fan Cooling |
| Permanent operating temperature (peak) : | 55 (60) °C                        | Air Flow                   | --          |
| Expansion device:                        | Capillary tube or Expansion valve | Maximum motor temperature: | 130 °C      |

### ELECTRICAL DATA

|   |               |   |              |
|---|---------------|---|--------------|
| Start winding resistance at 25°C (77°F):          | 4.84 Ω +/- 8% | Run winding resistance at 25°C (77°F):          | 1.7 Ω +/- 8% |
| FLA - full load amperage L/MBP [A] 50 Hz / 60 Hz: | - / -         | LRA (A) 50 Hz / 60 Hz:                          | - / -        |
|   |               | FLA - full load amperage HBP [A] 50 Hz / 60 Hz: | - / -        |

### MECHANICAL DATA

|       |          |               |                       |
|-------|----------|---------------|-----------------------|
| Bore: | 42.85 mm | Stroke:       | 11.93 mm              |
|       |          | Displacement: | 34.38 cm <sup>3</sup> |

### OTHER INFORMATION

|                 |                   |                  |        |
|-----------------|-------------------|------------------|--------|
| Weight:         | 21.5 kg           | Oil charge:      | 750 ml |
| Lubricant type: | Polyolester ISO22 | Nitrogen charge: | Yes    |

### EXTERNAL SETTINGS

|                     | Shape             | Material     | Diameter [mm] |
|---------------------|-------------------|--------------|---------------|
| Suction connector   | Vertical          | Copper       | 12.77         |
| Discharge connector | Slanted J         | Copper       | 8.00          |
| Process connector   | Vertical          | Copper       | 6.42          |
| Base plate:         | American Standard | Tray holder: | No            |

### PERFORMANCES AT STANDARD CHECK-POINTS

| Checkpoint  | Cooling capacity | Power consumption | Gas flow rate | Cooling Efficiency | Heating capacity +/- | Heating Efficiency |
|-------------|------------------|-------------------|---------------|--------------------|----------------------|--------------------|
|             | +/-5%<br>W       | +/-5%<br>W        | +/-5%<br>kg/h | +/- 7%<br>W/W      | 5% *<br>W            | +/- 7%<br>W/W      |
| EN12900 LBP | 799.38           | 799.51            | 21.65         | 1.00               | 1,179.72             | 1.48               |
| EN12900 MBP | 2,576.12         | 1,682.25          | 77.37         | 1.53               | 3,365.08             | 2.00               |
| EN12900HO   | 1,028.55         | 1,075.47          | 32.05         | 0.96               | 1,584.11             | 1.47               |

\* Calculations performed considering isentropic compression and a housing loss of 10%. This is an estimated heat amount discarded in the discharge pipe and the condenser combined.

**CONDENSING TEMP. 35 °C****(SUBCOOLING : 22.2 K, RETURN TEMP.: 32 °C)**

| Evaporating temperature °C | Cooling capacity | Power consumption | Gas flow rate | Cooling Efficiency | Heating capacity +/- | Heating Efficiency |
|----------------------------|------------------|-------------------|---------------|--------------------|----------------------|--------------------|
|                            | +/-5%<br>W       | +/-5%<br>W        | +/-5%<br>kg/h | +/- 7%<br>W/W      | 5% *<br>W            | +/- 7%<br>W/W      |
| -40.00                     | 823.28           | 659.52            | 15.93         | 1.25               | 1,132.80             | 1.72               |
| -35.00                     | 1,137.23         | 776.06            | 22.06         | 1.47               | 1,521.15             | 1.96               |
| -30.00                     | 1,517.40         | 907.35            | 29.53         | 1.67               | 1,975.38             | 2.18               |
| -25.00                     | 1,973.54         | 1,049.25          | 38.54         | 1.88               | 2,503.28             | 2.39               |
| -20.00                     | 2,515.61         | 1,195.09          | 49.34         | 2.10               | 3,112.29             | 2.60               |
| -15.00                     | 3,154.35         | 1,335.60          | 62.17         | 2.36               | 3,810.32             | 2.85               |
| -10.00                     | 3,901.76         | 1,459.03          | 77.36         | 2.67               | 4,606.27             | 3.16               |

**CONDENSING TEMP. 45 °C****(SUBCOOLING : 22.2 K, RETURN TEMP.: 32 °C)**

| Evaporating temperature °C | Cooling capacity | Power consumption | Gas flow rate | Cooling Efficiency | Heating capacity +/- | Heating Efficiency |
|----------------------------|------------------|-------------------|---------------|--------------------|----------------------|--------------------|
|                            | +/-5%<br>W       | +/-5%<br>W        | +/-5%<br>kg/h | +/- 7%<br>W/W      | 5% *<br>W            | +/- 7%<br>W/W      |
| -40.00                     | 640.21           | 636.42            | 13.46         | 1.01               | 928.66               | 1.46               |
| -35.00                     | 923.65           | 765.87            | 19.47         | 1.21               | 1,300.43             | 1.70               |
| -30.00                     | 1,264.89         | 913.87            | 26.75         | 1.38               | 1,730.57             | 1.89               |
| -25.00                     | 1,674.60         | 1,077.95          | 35.56         | 1.55               | 2,228.91             | 2.07               |
| -20.00                     | 2,162.64         | 1,252.51          | 46.13         | 1.73               | 2,803.34             | 2.24               |
| -15.00                     | 2,739.07         | 1,428.84          | 58.75         | 1.92               | 3,461.37             | 2.42               |
| -10.00                     | 3,414.76         | 1,595.14          | 73.71         | 2.14               | 4,210.99             | 2.64               |

**CONDENSING TEMP. 55 °C****(SUBCOOLING : 22.2 K, RETURN TEMP.: 32 °C)**

| Evaporating temperature °C | Cooling capacity | Power consumption | Gas flow rate | Cooling Efficiency | Heating capacity +/- | Heating Efficiency |
|----------------------------|------------------|-------------------|---------------|--------------------|----------------------|--------------------|
|                            | +/-5%<br>W       | +/-5%<br>W        | +/-5%<br>kg/h | +/- 7%<br>W/W      | 5% *<br>W            | +/- 7%<br>W/W      |
| -40.00                     | 446.42           | 586.29            | 10.32         | 0.76               | 687.20               | 1.17               |
| -35.00                     | 704.86           | 729.64            | 16.34         | 0.97               | 1,051.29             | 1.44               |
| -30.00                     | 1,008.83         | 892.57            | 23.47         | 1.13               | 1,459.59             | 1.64               |
| -25.00                     | 1,371.51         | 1,075.47          | 32.05         | 1.28               | 1,927.07             | 1.79               |
| -20.00                     | 1,803.53         | 1,274.47          | 42.36         | 1.42               | 2,463.63             | 1.93               |
| -15.00                     | 2,314.67         | 1,481.80          | 54.69         | 1.56               | 3,077.10             | 2.08               |
| -10.00                     | 2,914.90         | 1,685.89          | 69.36         | 1.73               | 3,774.87             | 2.24               |

**ELECTRICAL ACCESSORIES**

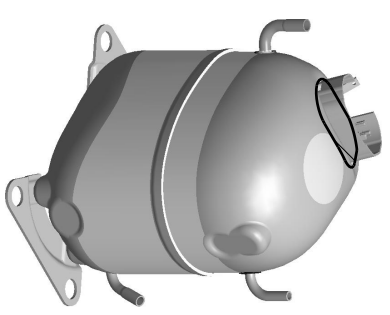
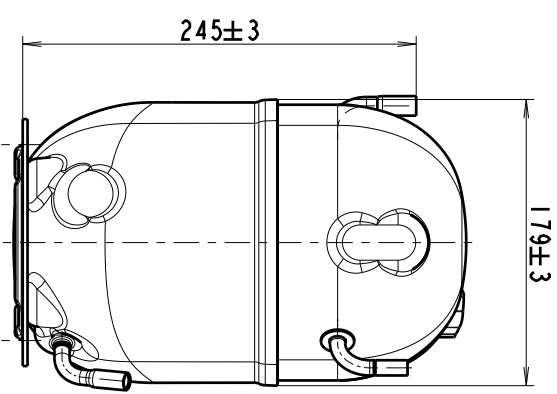
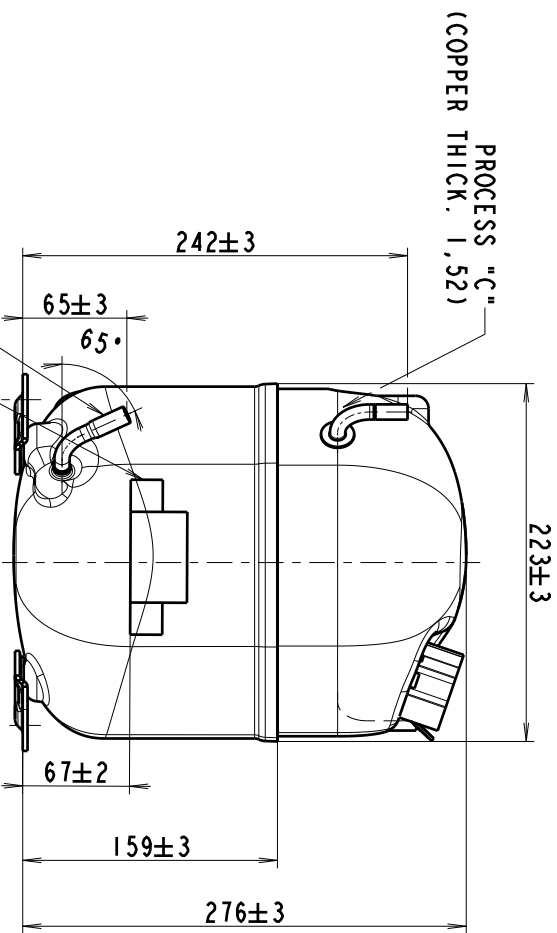
|                     |               |
|---------------------|---------------|
| Kit:                | 1             |
| Starter device:     | VOLTAGE RELAY |
| Engineering code:   | RVA2L3C-112   |
| Run capacitor:      | 20            |
| Starting capacitor: | 88-108        |

**Thermal protector:** 15HM1963-248**Institutes approved for this electric kit:**

If purchased without electricals consult Embraco to verify the supplier of electricals approved for this compressor

**MECHANICAL ACCESSORIES**

|                |     |                |          |
|----------------|-----|----------------|----------|
| Rubber damper: | Yes | Metal bushing: | Optional |
|----------------|-----|----------------|----------|

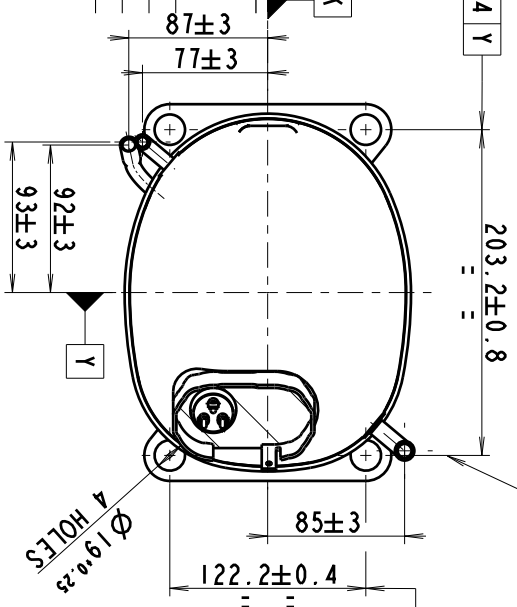


PROCESS "C"  
(COPPER THICK. 1,52)

DISCHARGE "A"  
(COPPER THICK. 1,52)

SUCTION "B"  
(COPPER THICK. 1,52)

PLACE FOR INMETRO  
COMPRESSOR LABEL  
2.216.541



| ECM    | REVISION | LO  | BY    | APP | DATE |            |
|--------|----------|---|-------|-----|------|------------|
| 517908 | 1        | CHANGED PROCESS TUBE                            | TAB   | LF  | JK   | 15.06.2012 |
| 519422 | 2        | STANDARDISATION OF N.J. BOTTOM SHELL.           | VIEWS | PT  | JK   | 04.07.2012 |
| 28918  | 3        | ALL BOMS CORRECTION. F. E. FROM 94301 TO 94311. | TAB   | PT  | JK   | 06.05.2013 |
| 30537  | 4        | ADDED INMETRO LABEL                             | C6    | DG  | M6   | 01.08.2013 |

|                                  |  |                       |  |                          |  |                       |  |                                      |  |   |  |
|----------------------------------|--|-----------------------|--|--------------------------|--|-----------------------|--|--------------------------------------|--|---|--|
| MATERIAL :                       |  | A                     |  | B                        |  | C                     |  | SHELL TYPE                           |  | MODELS  |  |
| CODE :                           |  | 8,0-8,08<br>X 23 DEEP |  | 12,77-12,85<br>X 22 DEEP |  | 6,42-6,5<br>X 22 DEEP |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| DRAWN : PETER TEPLICA 16.12.2009 |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| APP. : JAN KAKALEJCIN            |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| ECM : 514846                     |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| NAME                             |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| NJ EXTERNAL VIEW                 |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| HIGH                             |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| GEN. TOL. :                      |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| ANG. TOL. :                      |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| SCALE : 1:3                      |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| REPLACE                          |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| No.                              |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| 1.960.838 REV.6                  |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |
| 1.960.838                        |  | A                     |  | B                        |  | C                     |  | 943,01<br>143,01<br>947,01<br>147,01 |  | NJ2192GK NJ2212GK<br>NJ9232GK NJ9238GK<br>NJ17238E NJ17240F<br>NJ9232E NJ9238E<br>NJ9232G5 NJ2192GJ |  |

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