



## ENGINEERING DATA SHEET

**RSa22i**  
60Hz

CCN: 47724925001  
Rev.: C  
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Sheet: 1 of 1  
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| Model                                                                                |                              | RSa22i-A110                       | RSa22i-A125                       | RSa22i-A145                       | RSa22i-A200                       |
|--------------------------------------------------------------------------------------|------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <b>GENERAL PERFORMANCE DATA</b>                                                      |                              |                                   |                                   |                                   |                                   |
| Maximum Target Operating Pressure                                                    | (2) barg (psig)              | 7.6 (110)                         | 8.6 (125)                         | 10.0 (145)                        | 13.8 (200)                        |
| Rated Discharge Pressure                                                             | barg (psig)                  | 6.9 (100)                         | 7.9 (115)                         | 9.3 (135)                         | 13.1 (190)                        |
| Minimum Operating Pressure                                                           | barg (psig)                  | 5.2 (75)                          | 5.2 (75)                          | 5.2 (75)                          | 5.2 (75)                          |
| Maximum Operating Ambient Temperature                                                | °C (°F)                      | 40 (104)                          | 40 (104)                          | 40 (104)                          | 40 (104)                          |
| Minimum Operating Ambient Temperature                                                | °C (°F)                      | 2 (36)                            | 2 (36)                            | 2 (36)                            | 2 (36)                            |
| Maximum System Temperature Setting                                                   | °C (°F)                      | 115.5 (240)                       | 115.5 (240)                       | 115.5 (240)                       | 115.5 (240)                       |
| Nominal Power - Main Motor                                                           | kW (HP)                      | 22.0 (30)                         | 22.0 (30)                         | 22.0 (30)                         | 22.0 (30)                         |
| Main Motor Efficiency                                                                | (3) %                        | 91.7%                             | 91.7%                             | 91.7%                             | 91.7%                             |
| Capacity FAD                                                                         | (1) m³/min (CFM)             | 3.57 (126.0)                      | 3.40 (120.2)                      | 3.15 (111.3)                      | 2.60 (91.7)                       |
| Package Input Power with Fan - Air Cooled                                            | (4) kW                       | 25.18                             | 25.45                             | 25.43                             | 25.94                             |
| Specific Power - Air Cooled                                                          | (4)(5) kW/m³/min (kW/100CFM) | 7.06 (19.98)                      | 7.48 (21.17)                      | 8.07 (22.85)                      | 9.99 (28.29)                      |
| <b>SOUND LEVEL</b>                                                                   |                              |                                   |                                   |                                   |                                   |
| Noise Level Standard Package - Air Cooled                                            | (6) Sound Pressure - dB(A)   | 70                                | 70                                | 70                                | 70                                |
| Noise Level Standard Package - Air Cooled                                            | Sound Power - dB(A)          | 85                                | 85                                | 85                                | 85                                |
| <b>COOLING DATA (@ Maximum Ambient Temperature &amp; Maximum Discharge Pressure)</b> |                              |                                   |                                   |                                   |                                   |
| Heat Removal (Oil Cooler)                                                            | kW (1000 Btu/hr)             | 20.9 (71)                         | 21.4 (73)                         | 21.7 (74)                         | 22.5 (77)                         |
| Heat Removal (Oil and Aftercooler)                                                   | kW (1000 Btu/hr)             | 25.2 (86)                         | 25.4 (87)                         | 25.5 (87)                         | 26.1 (89)                         |
| Permitted Additional Static Pressure                                                 | Pa (in H <sub>2</sub> O)     | 40 (.16)                          | 40 (.16)                          | 40 (.16)                          | 40 (.16)                          |
| Fan Air Flow                                                                         | m³/min (CFM)                 | 55 (1942)                         | 55 (1942)                         | 55 (1942)                         | 55 (1942)                         |
| Fan Motor Nominal Power                                                              | (16) kW                      | N/A                               | N/A                               | N/A                               | N/A                               |
| Cooling Air Temperature Rise @ 30°C                                                  | °C (°F)                      | 22 (40)                           | 22 (40)                           | 22 (40)                           | 23 (41)                           |
| Aftercooler CTD                                                                      | (7) °C (°F)                  | 16 (29)                           | 16 (30)                           | 16 (30)                           | 17 (30)                           |
| <b>AIR END DATA</b>                                                                  |                              |                                   |                                   |                                   |                                   |
| Male Rotor Speed                                                                     | RPM                          | 5308                              | 5080                              | 4739                              | 4038                              |
| Tip Speed Rotor                                                                      | m/sec                        | 28.07                             | 26.87                             | 25.06                             | 21.36                             |
| Full Load Shaft Power                                                                | kW                           | 23.1                              | 23.3                              | 23.3                              | 23.8                              |
| <b>COOLANT LUBRICATION DATA</b>                                                      |                              |                                   |                                   |                                   |                                   |
| Total Coolant Capacity - Air Cooled                                                  | (12) litres (US gal)         | 10 (2.5)                          | 10 (2.5)                          | 10 (2.5)                          | 10 (2.5)                          |
| <b>PIPING CONNECTIONS</b>                                                            |                              |                                   |                                   |                                   |                                   |
| Air Discharge                                                                        | (8) Inches NPT               | 1.0" INCH (FEMALE)                | 1.0" INCH (FEMALE)                | 1.0" INCH (FEMALE)                | 1.0" INCH (FEMALE)                |
| Package Automatic Condensate Drain                                                   | Inches NPT                   | .25 INCH (FEMALE)                 | .25 INCH (FEMALE)                 | .25 INCH (FEMALE)                 | .25 INCH (FEMALE)                 |
| Coolant Drain - Hose Size                                                            | Inches NPT                   | 1/2 INCH (FEMALE)                 | 1/2 INCH (FEMALE)                 | 1/2 INCH (FEMALE)                 | 1/2 INCH (FEMALE)                 |
| Diameter of Power Inlet                                                              | mm (Inches)                  | 38 (1.5)                          | 38 (1.5)                          | 38 (1.5)                          | 38 (1.5)                          |
| <b>DIMENSIONS AND WEIGHT</b>                                                         |                              |                                   |                                   |                                   |                                   |
| Length, Width, Height (Base Mounted)                                                 | mm (inches)                  | 770, 870, 1160 (30.3, 34.3, 45.7) | 770, 870, 1160 (30.3, 34.3, 45.7) | 770, 870, 1160 (30.3, 34.3, 45.7) | 770, 870, 1160 (30.3, 34.3, 45.7) |
| Net Weight - Air Cooled Base Mounted                                                 | kg (lb.)                     | 443 (977)                         | 443 (977)                         | 443 (977)                         | 443 (977)                         |
| GA Drawing Number - Air Cooled                                                       | Base Mounted                 | 47763591                          | 47763591                          | 47763591                          | 47763591                          |
|                                                                                      | Receiver Mounted             | 47749762                          | 47749762                          | 47749762                          | 47749762                          |
| <b>ELECTRICAL DATA</b>                                                               |                              |                                   |                                   |                                   |                                   |
| Motor Protection                                                                     | (13)                         | TEFC, IP55                        | TEFC, IP55                        | TEFC, IP55                        | TEFC, IP55                        |
| Full Load Package Current - Air Cooled                                               | (9) Amps @ 200V              | 89                                | 90                                | 90                                | 92                                |
|                                                                                      | Amps @ 230V                  | 77                                | 78                                | 78                                | 80                                |
|                                                                                      | Amps @ 460V                  | 39                                | 39                                | 39                                | 40                                |
|                                                                                      | Amps @ 575V                  | 31                                | 32                                | 32                                | 32                                |
| Main Motor Locked Rotor Current                                                      | (14) Amps @ 200V             | 456                               | 456                               | 456                               | 456                               |
|                                                                                      | Amps @ 230V                  | 520                               | 520                               | 520                               | 520                               |
|                                                                                      | Amps @ 460V                  | 260                               | 260                               | 260                               | 260                               |
|                                                                                      | Amps @ 575V                  | 304                               | 304                               | 304                               | 304                               |
| Package Power Factor                                                                 |                              | 0.90                              | 0.90                              | 0.90                              | 0.90                              |
| <b>Electrical Installation</b>                                                       |                              |                                   |                                   |                                   |                                   |
| Recommended Supply Cable Size                                                        | (10) mm²Cu (AWG) @ 200V      | 43 (1)                            | 43 (1)                            | 43 (1)                            | 43 (1)                            |
|                                                                                      | mm²Cu (AWG) @ 230V           | 34 (2)                            | 34 (2)                            | 34 (2)                            | 34 (2)                            |
|                                                                                      | mm²Cu (AWG) @ 460V           | 14 (6)                            | 14 (6)                            | 14 (6)                            | 14 (6)                            |
|                                                                                      | mm²Cu (AWG) @ 575V           | 9 (8)                             | 9 (8)                             | 9 (8)                             | 9 (8)                             |
| Maximum Recommended Fuse Rating                                                      | (10)(11) Amps @ 200V         | 125                               | 125                               | 125                               | 125                               |
|                                                                                      | Amps @ 230V                  | 110                               | 110                               | 110                               | 110                               |
|                                                                                      | Amps @ 460V                  | 60                                | 60                                | 60                                | 60                                |
|                                                                                      | Amps @ 575V                  | 45                                | 45                                | 45                                | 45                                |

## Notes:

- FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C.
- Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
- IE3 efficiency motor
- Measured at rated capacity and rated pressure
- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
- Measured in free field conditions per ISO 2151 using Parallelpiped Method; ducted inlet and outlet, with + 3 dB(A) tolerance
- CTD based on 100°F/38°C inlet air at 40% Relative Humidity (For alternate conditions contact Ingersoll Rand)
- BSP or NPT, depending on regional standard
- Maximum current includes 10% additional current due to fouled filters and elements
- 90°C copper cables. Always apply local electrical codes for sizing cables and system protection
- Time delay fuse recommended. Apply local electrical codes for fuse sizing
- Coolant volumes listed are approximate. See operator manual for coolant fill procedure
- 60Hz (±0.5%) motor voltage tolerance: (208)±10% ; (220)±10% ; (230)±10% ; (380)-6/+10% ; (440) ±10% ; (575) -6/+10%
- Star-Delta starting current inrush is about 33% of direct starting current
- During the Star-Delta open-starting transition, the in-rush current value could instantaneously peak from 1.8 to 2.8 times the noted Locked-Rotor-Amperage (LRA) values
- Package cooling fan mounted to main drive motor shaft extension.

Product Improvement is a continuing goal at Ingersoll Rand. Design and specifications are subject to change without notice or obligation.