



Projects & Technology
Controlled Document

Carmon Creek Project

| | |
|---|----------------------------|
| Document Number: CCK-4512313530-0000-C08-00001-000 | Rev: 01 |
| Approval Status: | |
| <input type="checkbox"/> 1 - Approved, No Comment - Proceed with Fabrication/Construction <input type="checkbox"/> 2 - Approved, Note Comments - Revise and Resubmit. Proceed with Fabrication/Construction <input type="checkbox"/> 3 - Not Approved, Revise and Resubmit - do not proceed with Fabrication/Construction <input checked="" type="checkbox"/> 4 - Information Only | |
| <i>VENDORS PLEASE NOTE: Permission to proceed does not constitute acceptance or approval of design details, calculations, analyses, test methods or materials developed or selected by the supplier and does not relieve supplier from full compliance with contractual obligation.</i> | |
| Responsible Engineer Signature: Oleg Bunimovich. PO is closed and the document is closed as it is. | Date: 03/03/2016 |

Equipment Data Sheet

| | | | |
|----------------------------------|-----------------------------------|-----------|---|
| Vendor Name | INGERSOLL RAND | | |
| Purchase Order Number | 4561231231 | | |
| Shell Project Document Number | CCK-4561231231-0000-C02-00001-001 | Shell Rev | 0 |
| Vendor Document Number | IR COMCK 012 | Ven. Rev | D |
| Issue Date | April 16 2015 | | |
| Additional VDRL codes applicable | C09, K07 | | |

Approval Status:

1 - Approved, No Comments - Proceed with Fabrication
 2 - Approved with Comments - Revise and Resubmit. Proceed with Fabrication
 3 - Not Approved, Revise and Resubmit
 4 - Information Only

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Responsible Engineer Signature: _____ Date: -

Applicable Tags

| | | | | | | | |
|------|--|--|--|--|--|--|--|
| SKID | | | | | | | |
| TBA | | | | | | | |
| | | | | | | | |

ENGINEERING MANUAL

SSR UP SERIES



CCN: 23753437
 Rev.: D ECO: 80133
 Ref.: 9904
 Page: 104
 Date: 07th November 2011
 Cancels: 01st January 2011

Point of Manufacture - Campbellsville, Kentucky USA
 SSR UP6-30-125 , UP6-30-150 , UP6-30-200
 60 HERTZ ENGINEERING DATA

| Model | | 30-125 | 30-150 | 30-200 |
|--------------------------------------|---------------------------|------------|------------|------------|
| GENERAL COMPRESSOR DATA | | | | |
| Capacity (Ref. Intake Cond.) FAD (1) | cfm (m ³ /min) | 117 (3.31) | 112 (3.17) | 92 (2.61) |
| Maximum Operating Pressure | psig (barg) | 125 (8.5) | 150 (10.3) | 200 (13.8) |
| Minimum Operating Pressure | psig (barg) | 65 (4.5) | 65 (4.5) | 65 (4.5) |
| Maximum Operating Temperature | °F (°C) | 105 (40) | 105 (40) | 105 (40) |
| Minimum Operating Temperature | °F (°C) | 36 (2) | 36 (2) | 36 (2) |

| SOUND LEVEL (2) | | | | |
|------------------------|-------|----|----|----|
| Base mounted Enclosed | dB(A) | 69 | 69 | 69 |

| COOLING DATA | | | | |
|--|---------------------------|-------------|-------------|-------------|
| Air-cooled (Ambient Temperature 40°C/105°F) | | | | |
| Rated Airend Discharge temperature | °F (°C) | 215 (102) | 210 (99) | 205 (96) |
| A/E Injection Temperature | °F (°C) | 183 (84) | 183 (84) | 183 (84) |
| Aftercooler - Inlet (3) | °F (°C) | 205 (96) | 198 (92) | 198 (92) |
| Aftercooler - Outlet | °F (°C) | 130 (54) | 126 (52) | 124 (51) |
| Heat Removal Oil Cooler | 1000 Btu/hr (kW) | 73.3 (21.5) | 74.5 (21.8) | 76.5 (22.4) |
| Heat Removal Oil and Aftercooler | 1000 Btu/hr (kW) | 84.0 (24.6) | 84.0 (24.6) | 84.0 (24.6) |
| Heat Removal dryer Condenser (max) | 1000 Btu/hr (kW) | 8.9 (2.6) | 8.9 (2.6) | 8.9 (2.6) |
| Oil Flow | US gpm (lpm) | 9.2 (34.8) | 11.1 (42) | 14.0 (53) |
| Fan Air Flow | cfm (m ³ /min) | 2100 (59.5) | 2100 (59.5) | 2100 (59.5) |
| Dryer Fan airflow | cfm (m ³ /min) | 620 (17.5) | 620 (17.5) | 620 (17.5) |
| Cooling Air CTD | °F (°C) | 34.5 (19.5) | 34.5 (19.5) | 34.5 (19.5) |
| Aftercooler CTD (3) | °F (°C) | 26 (14) | 22 (12) | 20 (11) |

| CONSTRUCTION FOUNDATION AND MOUNTING DATA | | | |
|---|--|--|----------|
| Base mounted - see installation drawing | | | 22063333 |
| 120 Gal receiver mounted - see installation drawing | | | 22063366 |
| 240 Gal receiver mounted - see installation drawing | | | 22063374 |

| PIPING CONNECTIONS | | | | |
|-----------------------------|----------------------|-----|-----|-----|
| Air Discharge Base Mount | Inches NPT | 1.0 | 1.0 | 1.0 |
| Air Discharge from Receiver | Inches NPT | 1.0 | 1.0 | 1.0 |
| Coolant Drain | Ball Valve -Inch NPT | ¼ | ¼ | ¼ |
| Power Inlet | Inches | 1¼ | 1¼ | 1¼ |
| Package Condensate Drain | Inches | ¼ | ¼ | ¼ |

| COOLANT LUBRICATION DATA | | | | |
|---------------------------------|--------|---------------|---------------|---------------|
| Coolant Sump Capacity | US Gal | 1.82 (7.0) | 1.82 (7.0) | 1.82 (7.0) |
| Total coolant fill capacity | US Gal | 3.38 (13.0) | 3.38 (13.0) | 3.38 (13.0) |

| DIMENSIONS | | Base Mounted | 120 Gal Rec | 240 Gal Rec |
|-----------------------|--------|-----------------|-----------------|-----------------|
| length, width, height | Inches | 52 / 36 / 42.5 | 77.5 / 36 / 71 | 94 / 36 / 76.5 |
| | mm | 1321/ 914/ 1080 | 1962/ 914/ 1796 | 2390/ 914/ 1940 |
| With Optional Dryer | Inches | 67 / 36 / 42.5 | 77.5 / 36 / 72 | 95 / 36 / 76.5 |
| | mm | 1702/ 914/ 1080 | 1962/ 914/ 1797 | 2390/ 914/ 1941 |

| SHIPPING DATA - NET WEIGHTS | | Base Mounted | 120 Gal Rec | 240 Gal Rec |
|------------------------------------|----------|--------------|--------------|--------------|
| | lb. (kg) | 1290 (586) | 1616 (733) | 1885 (855) |
| With Optional Dryer | lb. (kg) | 1536 (698) | 1862 (846) | 2130 (968) |

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| Model | 30-125 | 30-150 | 30-200 |
|-------|--------|--------|--------|
|-------|--------|--------|--------|

AIREND DATA

| | | 30-125 | 30-150 | 30-200 |
|-------------------------|--------|--------|--------|--------|
| Rotor Diameter (male) | inches | 4.21 | 4.21 | 4.21 |
| Male Rotor Speed | rpm | 4545 | 4179 | 3546 |
| Tip Speed | ft/sec | 83.5 | 76.8 | 65.2 |

ELECTRICAL DATA - ALL UNITS SSR UP6-30

| | | 200v | | 230v | | 380v | | 460v | | 575v | |
|--|----|-------------------|------|-------------------|------|-------------------|------|-------------------|------|-------------------|------|
| | | ODP | TEFC | ODP | TEFC | ODP | TEFC | ODP | TEFC | ODP | TEFC |
| Nominal Power - Driver | hp | 30.0 | | 30.0 | | 30.0 | | 30.0 | | 30.0 | |
| Rated Power - Fan | hp | Main Motor Driven | | Main Motor Driven | | Main Motor Driven | | Main Motor Driven | | Main Motor Driven | |
| Applied Power at maximum pressure - Full Package | hp | 33.0 | | 33.0 | | 33.0 | | 33.0 | | 33.0 | |

Motor Enclosure

| | | 200v | | 230v | | 380v | | 460v | | 575v | |
|---|------|-------|---------|-------|---------|-------|-------|-------|---------|-------|--------|
| Nominal Current - Drive Motor (8) | Amps | 83.7 | 83.6 | 72.8 | 72.8 | 44.1 | 44.1 | 36.4 | 36.4 | 29.1 | 29.1 |
| Package Current - maximum pressure | Amps | 91.3 | 91.9 | 79.3 | 79.9 | 48.1 | 48.4 | 39.7 | 40.0 | 31.7 | 32.0 |
| Drive Motor RPM | | 1770 | 1770 | 1770 | 1770 | 1765 | 1770 | 1770 | 1770 | 1770 | 1770 |
| Drive Motor Frame | | 286TZ | 180 L | 286TZ | 180 L | 286TZ | 180 L | 286TZ | 180 L | 286TZ | 180 L |
| Drive Motor Full Voltage Locked Rotor (star) Amps (7) | | 500.0 | (216.7) | 434.0 | (188.4) | 262.7 | (114) | 217.0 | (94.2) | 169.0 | (75.4) |
| Drive Motor Efficiency (10) | | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 | 0.924 |
| Drive Motor Power Factor (10) | | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Test certificate number | | TBA | | 23514 | S310914 | TBA | TBA | 23514 | S310914 | TBA | |

Dryer electrical data

| | 115-1-60 |
|-------------------|----------|
| Full Load Current | 12.3 |
| Starting Current | 48.8 |

Electrical Installation

| | | 200v | | 230v | | 380v | | 460v | | 575v | |
|--|--------|------|-----|------|-----|------|----|------|----|------|----|
| Mains Supply Cable (8) | Gage | 1 | 1 | 2 | 2 | 4 | 4 | 6 | 6 | 8 | 8 |
| Suggested Fuse Rating | Amps | 150 | 150 | 125 | 125 | 80 | 80 | 60 | 60 | 50 | 50 |
| Recommended wire Size - Dryer (8) (13) | 14 AWG | | | | | | | | | | |

Refrigerated Dryer Data

| | ISO Class |
|--|--------------|
| Pressure Dew Point ISO Class ⁽¹²⁾ | 5 |
| Refrigerant weight of R-134a | Grams / (Oz) |
| | 500/(18.1) |

Filter Data

| CCN | Particulate | | Liquid | |
|----------|-------------|------------|-----------|---------------------------------|
| | ISO Class | Filtration | ISO Class | Filtration |
| 85570588 | 3 | 1 micron | 3 | 0.6 mg/m ³ (0.5 ppm) |

Pressure Drop data by operating pressure

| | | barG | psig | barG | psig | barG | psig |
|---|---------------|------|------|------|------|------|------|
| Dryer Pressure Drop | barG / (psig) | 8.6 | 125 | 10.3 | 150 | 13.8 | 200 |
| Primary filter wet pressure drop | barG / (psig) | 0.22 | 3.2 | 0.15 | 2.1 | 0.17 | 2.5 |
| Total Pressure Drop ⁽¹¹⁾ For ISO Class 3.6.3 air | barG / (psig) | 0.14 | 2.0 | 0.13 | 1.8 | 0.11 | 1.6 |
| | | 0.36 | 5.2 | 0.27 | 3.9 | 0.28 | 4.1 |

Notes :

- (1) FAD (Free Air Delivery) is full package performance including all losses. Tested in accordance with ISO 1217 : 1996 Annex C.
- (2) Measured in free field conditions in accordance with PNEUROP/CAGI test codes, with +/- 3 dB(A) tolerance.
- (3) 40% Relative Humidity Inlet Air
- (4) Predicted CAT cell data at rated discharge pressure.
- (7) Star Delta Starting Inrush excluding transient spike.
- (8) This is a minimum requirement based on 90°C wire - It may be necessary to use larger cables to comply with local regulations or if the voltage drop exceeds 5% of the nominal voltage.
- (10) Measured at nominal motor power
- (11) Total package including compressor, integral dryer with pre and final compressed air filters
- (12) Dew point measured in accordance with ISO 8573-1:2001. With inlet air to package of 25°C (77 °F) and RH at 60%
- (13) Always apply local electrical codes for sizing cables and fusing