

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				
length, width, height	Inches	Base Mounted 52 / 36 / 42.5	120 Gal Rec 77.5 / 36 / 71	240 Gal Rec 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				
	lb. (kg)	Base Mounted 1290 (586)	120 Gal Rec 1616 (733)	240 Gal Rec 1885 (855)
With Optional Dryer	lb. (kg)	1536 (698)	1862 (846)	2130 (968)

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AIREND DATA

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	
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	
		ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC

Motor Enclosure

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

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⁾	°C (°F)	5	7°C (46°F)
Refrigerant weight of R-134a	Grams / (Oz)	500/(18.1)	

Filter Data

CCN

Primary filter detail - at 21°C (70°F)

85570588

Particulate	
ISO Class	Filtration
3	1 micron

Liquid	
ISO Class	Filtration
3	0.6 mg/m ³ (0.5 ppm)

Pressure Drop data by operating pressure

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