

ENGINEERING MANUAL

SSR UP SERIES



CCN: 23753452
Rev.: D ECO 81751
Ref.: 9904
Page: 108
Date: 30th April 2013
Cancels: 01st January 2011

Point of Manufacture - Campbellsville, Kentucky USA
SSR UP6-20-125HA , UP6-20-150HA , UP6-20-200HA
60 HERTZ ENGINEERING DATA

Model		20-125HA	20-150HA	20-200HA
GENERAL COMPRESSOR DATA				
Capacity (Ref. Intake Cond.) FAD (1)	cfm (m ³ /min)	77 (2.1)	67 (1.9)	58 (1.64)
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)	122 (50)	122 (50)	122 (50)
Minimum Operating Temperature	°F (°C)	36 (2)	36 (2)	36 (2)
SOUND LEVEL (2)				
Base mounted Enclosed	dB(A)	68	68	68
COOLING DATA				
Air-cooled (Ambient Temperature 122°F/50°C)				
Rated Airend Discharge temperature	°F (°C)	205 (96)	202 (94)	197 (92)
A/E Injection Temperature	°F (°C)	180 (82)	180 (82)	180 (82)
Aftercooler - Inlet (3)	°F (°C)	182 (83)	179 (82)	179 (82)
Aftercooler - Outlet	°F (°C)	130 (53.3)	126 (53.3)	124 (53.3)
Heat Removal Oil Cooler	1000 Btu/hr (kW)	41.8 (12.3)	49.6 (14.5)	51.3 (15)
Heat Removal Oil and Aftercooler	1000 Btu/hr (kW)	56.0 (16.4)	56.0 (16.4)	56.0 (16.4)
Heat Removal dryer Condenser (max)	1000 Btu/hr (kW)	6.3 (1.8)	6.3 (1.8)	6.3 (1.8)
Oil Flow	US gpm (lpm)	7.0 (26.5)	9.2 (34.7)	12.2 (46.1)
Fan Air Flow	cfm (m ³ /min)	2100 (59.5)	2100 (59.5)	2100 (59.5)
Dryer Fan airflow	cfm (m ³ /min)	420 (11.9)	420 (11.9)	420 (11.9)
Cooling Air CTD	°F (°C)	24 (13)	24 (13)	24 (13)
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 1203 (547)	120 Gal Rec 1530 (694)	240 Gal Rec 1799 (816)
With Optional Dryer	lb. (kg)	1428 (649)	1755 (798)	2025 (920)

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AIREND DATA

Rotor Diameter (male)	inches	4.21	4.21	4.21
Male Rotor Speed	rpm	3114	2826	2337
Tip Speed	ft/sec	57.2	51.9	43

ELECTRICAL DATA - ALL UNITS SSR UP6-20

ELECTRICAL DATA - ALL UNITS SSR UP6-20		200v		230v		380v		460v		575v	
Nominal Power - Driver	hp	20.0		20.0		20.0		20.0		20.0	
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	22.0		22.0		22.0		22.0		22.0	
		ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC
Motor Enclosure											
Nominal Current - Drive Motor (8)	Amps	60.1	58.7	52.3	51.1	31.7	30.9	26.2	25.5	21	20.5
Package Current - maximum pressure	Amps	66.4	64.7	57.7	56.3	35.0	34.1	28.9	28.2	23.1	22.5
Drive Motor RPM		1765	1770	1765	1770	1765	1770	1765	1770	1765	1770
Drive Motor Frame		284TZ	180M	284TZ	180M	284TZ	180M	284TZ	180M	284TZ	180M
Drive Motor Full Voltage Locked Rotor (star) Amps (7)		411.7	(182.2)	358.0	(158.4)	216.7	(114)	179.0	(79.2)	143.2	(63.4)
Drive Motor Efficiency (10)		0.913	0.924	0.913	0.924	0.913	0.924	0.913	0.924	0.913	0.924
Drive Motor Power Factor (10)		0.79	0.8	0.79	0.8	0.79	0.8	0.79	0.8	0.79	0.8
Test certificate number		TBA		23513	S312383	TBA	TBA	23513	S312383	TBA	
Dryer electrical data		115-1-60									
Full Load Current	12.3										
Starting Current	48.8										
Electrical Installation											
Mains Supply Cable (8)	Gage	4	4	4	4	6	6	10	10	10	10
Suggested Fuse Rating	Amps	90	90	80	80	50	50	40	40	35	35
Recommended wire Size - Dryer (8) (13)	14 AWG										

Refrigerated Dryer Data

		ISO Class	
Pressure Dew Point ISO Class (12)	°C (°F)	6	8°C (46°F)
Refrigerant weight of R-134a	Grams / (Oz)	320/(11.6)	

Filter Data

		CCN		Particulate		Liquid	
				ISO Class	Filtration	ISO Class	Filtration
Primary filter detail - at 21°C (70°F)		85570588		3	1 micron	3	0.6 mg/m ³ (0.5 ppm)
				barG	psig	barG	psig
Pressure Drop data by operating pressure		barG / (psig)		8.6	125	10.3	150
Dryer Pressure Drop	barG / (psig)	0.23		0.15	2.2	0.07	1
Primary filter wet pressure drop	barG / (psig)	0.11		0.10	1.4	0.09	1.2
Total Pressure Drop (11) For ISO Class 3.6.3 air	barG / (psig)	0.34		0.25	3.60	0.16	2.20

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