

ENGINEERING MANUAL

SSR
UP SERIES

CCN: 23753544
Rev.: D ECO: 80133
Ref.: 9905
Page: 104
Date: 07th November 2011
Cancels: 01st January 2011

Confidential Information

Points of Manufacture - Campbellsville Facility, Kentucky & SIRC, Shanghai, PRC.
SSR UP6-40-115, UP6-40-125, UP6-40-150, UP6-40-200
60 HERTZ ENGINEERING DATA

Model		40-115	40-125	40-150	40-200
GENERAL COMPRESSOR DATA					
Capacity (Ref. Intake Cond.) FAD (1)	cfm (m ³ /min)	183 (5.18)	180 (5.10)	170 (4.81)	143 (4.05)
Maximum Operating Pressure	psig (barg)	115 (8.0)	125 (8.5)	150 (10.3)	200 (13.8)
Minimum Operating Pressure	psig (barg)	65 (4.5)	65 (4.5)	65 (4.5)	65 (4.5)
Maximum Operating Temperature	°F (°C)	104 (40)	104 (40)	104 (40)	104 (40)
Minimum Operating Temperature	°F (°C)	36 (2)	36 (2)	36 (2)	36 (2)

SOUND LEVEL (2)

Base mounted Enclosed	dB(A)	69	69	69	69
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COOLING DATA**Air-cooled (Ambient Temperature 40°C/105°F)**

Max Airend Discharge Temperature	°F (°C)	216 (102)	216 (102)	216 (102)	216 (102)
A/E Injection Temperature	°F (°C)	187 (86)	187 (86)	187 (86)	187 (86)
Aftercooler - Inlet (3)	°F (°C)	203 (95)	202 (94)	199 (93)	195 (91)
Aftercooler - Outlet	°F (°C)	126 (52)	125 (52)	122 (50)	118 (48)
Heat Removal Oil Cooler	1000 Btu/hr (kW)	91.2 (26.7)	92.3 (27.1)	94.4 (27.7)	98.0 (28.7)
Heat Removal Oil and Aftercooler	1000 Btu/hr (kW)	121.4 (35.6)	121.9 (35.87)	122.7 (36.0)	122.8 (36.0)
Oil Flow	US gpm (lpm)	13.6 (51.5)	14.2 (53.8)	15.7 (59.4)	19.0 (71.9)
Fan Air Flow	cfm (m ³ /min)	3100 (87.8)	3100 (87.8)	3100 (87.8)	3100 (87.8)
Cooling Air CTD	°F (°C)	40 (22)	40 (22)	40 (22)	40 (22)
Aftercooler CTD (3)	°F (°C)	22 (12.2)	21 (11.7)	18 (10.0)	14 (7.8)

CONSTRUCTION FOUNDATION AND MOUNTING DATA

Base mounted - see installation drawing

22246326

PIPING CONNECTIONS

Air Discharge Base Mount	Inches NPT	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂	1 ¹ / ₂
Condensate Drain	Inches NPT	1/4	1/4	1/4	1/4
Coolant Drain	Ball Valve -Inch NPT	1/2	1/2	1/2	1/2
Power Inlet	Inches	2.1/2	2.1/2	2.1/2	2.1/2

COOLANT LUBRICATION DATA

Coolant Sump Capacity	US Gal. (liters)	3.7 (14)	3.7 (14)	3.7 (14)	3.7 (14)
Total coolant fill capacity	US Gal. (liters)	5.5 (21)	5.5 (21)	5.5 (21)	5.5 (21)

DIMENSIONS (with or without dryer)

length, width, height	Inches	Base Mounted 67.4/ 54.3 / 52.8			
	mm	1712/ 1379 / 1344			

SHIPPING DATA - NET WEIGHTS

	lb. (kg)	TEFC Motor 2436 (1105)	ODP motor 2326 (1055)
With Optional Dryer	lb. (kg)	2676 (1213)	2566 (1164)

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Model		40-115		40-125		40-150		40-200			
AIREND DATA											
Rotor Diameter (male)	inches	5.05		5.05		5.05		5.05			
Male Rotor Speed	rpm	3861		3733		3439		2948			
Tip Speed	ft/sec	85.04		82.22		75.75		64.93			
ELECTRICAL DATA - ALL UNITS SSR UP6-40	Volt	200		230		380		460		575	
Nominal Power - Driver	hp	40.0		40.0		40.0		40.0		40.0	
Rated Power - Fan	hp	1.3		1.3		1.3		1.3		1.3	
Maximum Applied Power - Package	hp	45.3		45.3		45.3		45.3		45.3	
		ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC	ODP	TEFC
Motor Enclosure											
Nominal Current - Drive Motor (6)	Amps	115.0	114.0	100.0	99.1	60.5	60.0	50.0	49.6	40.0	39.7
Package Current (includes fan) - maximum pressure	Amps	132.0	130.6	114.8	113.6	69.5	68.7	57.4	56.8	45.9	45.4
Drive Motor RPM		1775	1775	1775	1775	1775	1775	1775	1775	1775	1775
Drive Motor Frame		324T	324T	324T	324T	324T	324T	324T	324T	324T	324T
Drive Motor Locked Rotor - Full Voltage - EISA	Amps	864.2	905	751.5	787	454.8	476	375.7	393	300.6	315
Drive Motor Efficiency (6) EISA		0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941	0.941
Drive Motor Power Factor (6) EISA		0.8	0.81	0.8	0.81	0.8	0.81	0.8	0.81	0.8	0.81
Fan Motor Efficiency (6)		0.855		0.855		0.855		0.855		0.855	
Fan Motor Power Factor (6)		0.62		0.62		0.62		0.62		0.62	
Fan Motor Full Voltage Locked Rotor Current		43.7		38		19		23		15.2	
Dryer Electrical Data											
Full Load Current		5.0		4.5		Not Applicable		2.2		Not Applicable	
Starting Current		38.0		38.0				16.0			
Electrical Installation											
Mains Supply Cable (5)	Gage	4/0	4/0	3/0	3/0	2	2	3	3	4	4
Suggested Fuse Rating	Amps	175	175	150	150	100	90	75	75	60	60
Recommended wire size - Dryer (6) (7)	18 AWG										
Refrigerated Dryer Data											
	ISO Class 5										
Pressure Dew Point ISO Class (8)	°C (°F)	5° C (41° F)									
Refrigerant weight of R404-a	grams (oz)	840 (29.5)									
Pressure Drop											
Dryer Pressure Drop (9)	barG / (psig)	0.15 / (2.2)									

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 ISO 2151; 2004 annex C, with + 3 dB(A) tolerance.
- (3) 40% Relative Humidity Inlet Air
- (5) 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.
- (6) Measured at nominal motor power
- (7) Always apply local electrical codes for sizing and fusing
- (8) Dewpoint measured at 85 deg F, 12% RH ambient conditions with 125 PSIG dryer inlet pressure
- (9) Pressure drop measured at 125 psi and adjusted for 115 psi capacity. Higher pressure machines will have lower pressure drops.