

ENGINEERING MANUAL

SSR
Small UP - Total Air System



CCN: 23753726
Rev.: D ECO 81751
Ref.: 9902
Page: 600
Date: 30th April 2013
Cancels: 01st January 2011

Point of Manufacture - Campbellsville, USA

60 HERTZ ENGINEERING DATA

Model		UP6-5TAS-125	UP6-5TAS-150	
GENERAL COMPRESSOR DATA				
Capacity (Ref. Intake Condition.) FAD ⁽¹⁾	m³/min (cfm)	0.42 (14.9)	0.36 (12.9)	
Maximum & Rated Operating Pressure	barg (psig)	8.6 (125)	10.3 (150)	
Rated package discharge Pressure ⁽¹³⁾	barg (psig)	7.9 (119)	9.96 (145)	
Minimum Operating Pressure	barg (psig)	4.5 (65)	4.5 (65)	
Maximum Operating Temperature	°C (°F)	40 (105)	40 (105)	
Minimum Operating Temperature	°C (°F)	2 (36)	2 (36)	
SOUND LEVEL (2)				
Base mounted Enclosed	dB(A)	65	65	
COOLING DATA				
Air-cooled (Ambient Temperature 40°C/104°F)				
Coolant Discharge temperature	°C(°F)	80 (176)	85 (185)	
A/E Injection Temperature	°C(°F)	59 (138)	59 (138)	
(3) Aftercooler - Inlet	°C(°F)	79 (174)	85 (185)	
Aftercooler - Outlet	°C(°F)	51 (124)	51 (124)	
Heat Removal Oil Cooler	kW (1000 Btu/hr)	3.5 (11.9)	3.5 (11.9)	
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	4.1 (14.0)	4.1 (14.0)	
Heat Removal Dryer Condenser (Max)	kW (1000 Btu/hr)	1.4 (4.8)	1.4 (4.8)	
Coolant Flow	lpm (UK gpm)	17.0 (3.7)	21.0 (4.6)	
Cooling Air				
	Main Cooling Air Flow m³/min (cfm)	20.0 (700)	20.0 (700)	
	Dryer Cooling Airflow m³/min (cfm)	Included	Included	
Cooling Air CTD	°C (°F)	30 (54)	30 (54)	
Aftercooler CTD (3)	°C (°F)	11 (20)	11 (20)	
CONSTRUCTION FOUNDATION AND				
PIPING CONNECTIONS				
Air Discharge Base Mount	Inches BSPT (9)	0.75		
Air Discharge from ASME Receiver	Inches NPT	0.75		
Package Automatic Condensate Drain	Inches NPT	0.25		
Coolant Drain	Drain Plug	9/16"-SAE		
Power Inlet (Main)	Inch	1"		
Power Inlet (Dryer)	Inch	1/2"		
COOLANT LUBRICATION DATA				
Coolant Sump Capacity	litres (US gal)	3 (.8)		
Total coolant fill capacity	litres (US gal)	4.5 (1.2)		
DIMENSIONS				
length, width, height	mm	Basemount 1042/734/914	80 gal 1362/734/1541	120 gal 1897/734/1541
	Inches	41/28.9/36	53.6/28.9/60.7	74.7/28.9/60.7
GA Drawing Numbers		22431811	22431829	22469191
SHIPPING DATA - NET WEIGHTS				
Total Air System package	kg (lb.)	330 (725)	455 (1000)	470 (1035)

ENGINEERING MANUAL

SSR
Small UP - Total Air System



CCN: 23753726
Rev.: D ECO 81751
Ref.: 9902
Page: 601
Date: 30th April 2013
Cancels: 01st January 2011

Point of Manufacture - Campbellsville, USA
60 HERTZ ENGINEERING DATA

Model		UP6-5TAS-125		UP6-5TAS-150	
Compressor Module Data					
Rotor Diameter (male)	mm		74.25		74.25
Male Rotor Speed	rpm		2000		1900
Tip Speed	m/sec		7.78		7.39
Power Data					
Applied main motor power ⁽⁸⁾	HP		5.5		5.5
Applied Power - Fan	HP		Included		Included
Applied Power - Dryer compressor	HP		0.6		0.6
Applied Power - Dryer Fan	HP		Included		Included
Applied Power - Full Package ⁽⁸⁾	HP		6.1		6.1

ELECTRICAL DATA - ALL UNITS SSR UP6-5		115-1-60	230-1-60	200v	230v	380v	460v	575v
*** NOTE BLUE SHADE DENOTES SINGLE PHASE ***								
Nominal Current - Main Drive Motor ⁽⁸⁾ ODP/TEFC	Amps		21.4/21	14.1/13.6	12.3/11.8	7.5/7.2	6.2/5.9	4.9/4.7
Maximum Applied Power - TAS Package ⁽¹⁰⁾ ODP/TEFC	Amps		23.5/23.1	15.5/14.5	13.5/13	8.2/7.9	6.8/6.5	5.4/5.2
Starting current -- Direct on Line	Amps		147.0	103.0	90.0	55.0	45.0	36.0
Starting current -- Star Delta Start	Amps		N/A	N/A	N/A	N/A	N/A	N/A
Main Motor Data								
Nominal Power - Main Driver	HP		5.0	5.0	5.0	5.0	5.0	5.0
Drive Motor enclosure Protection			ODP/TEFC	ODP / TEFC	ODP/TEFC	ODP/TEFC	ODP/TEFC	ODP/TEFC
Drive Motor RPM			3480	3480	3480	3480	3480	3480
Drive Motor Frame			184T	182TZ/184TZ	182TZ/184TZ	182TZ/184TZ	182TZ/184TZ	182TZ/184TZ
Drive Motor Locked Rotor DOL/(S/D) ⁽⁵⁾	Amps		147.0	103.0	90.0	55.0	45.0	36.0
Drive Motor Efficiency ⁽⁸⁾			84.5/83	87.5/88.5	87.5/88.5	87.5/88.5	87.5/88.5	87.5/88.5
Drive Motor Power Factor ⁽⁸⁾			.89/.92	.88/.9	.88/.9	.88/.9	.88/.9	.88/.9
Test Certificate Number ⁽⁴⁾			AM44011 BL65526				AT43040 BK85519	
Dryer Electrical Data								
Full Load Current	Amps		5					
Starting Current	Amps		30					
Electrical Installation -- Total Air System								
Recommended wire size - Main motor - ⁽⁶⁾	Awg		8	10	12	14	14	14
Suggested Fuse Rating ⁽⁷⁾	Amps		40	25	20	12	10	8
Recommended wire size - Dryer - ⁽⁶⁾	Awg		18					

Refrigerated Dryer Data		ISO Class																	
Pressure Dew Point ISO Class ⁽¹¹⁾	°C (°F)	5	lower than 7°C (44°F)																
Refrigerant weight of R-134a	Grams / (Oz)		350/(12.7)																
Filter Data		CCN																	
Primary filter detail - at 21°C (70°F)		85567121																	
Final filter detail - at 21°C (70°F)		85567139																	
		<table><tr><th colspan="2">Particulate</th><th colspan="2">Liquid</th></tr><tr><th>ISO Class</th><th>Filtration</th><th>ISO Class</th><th>Filtration</th></tr><tr><td>3</td><td>1 micron</td><td>3</td><td>0.6 mg/m³ (0.5 ppm)</td></tr><tr><td>2</td><td>0.01 micron</td><td>1</td><td>0,01 mg/m³ (0.01 ppm)</td></tr></table>		Particulate		Liquid		ISO Class	Filtration	ISO Class	Filtration	3	1 micron	3	0.6 mg/m ³ (0.5 ppm)	2	0.01 micron	1	0,01 mg/m ³ (0.01 ppm)
Particulate		Liquid																	
ISO Class	Filtration	ISO Class	Filtration																
3	1 micron	3	0.6 mg/m ³ (0.5 ppm)																
2	0.01 micron	1	0,01 mg/m ³ (0.01 ppm)																
Pressure Drop data by operating pressure		barG	psig	barG	psig														
		8.6	125	10.3	150														
Dryer Pressure Drop	barG / (psig)	0.17	2.5	0.17	2.5														
Primary filter wet pressure drop	barG / (psig)	0.10	1.5	0.07	1														
Final filter wet pressure drop	barG / (psig)	0.14	2	0.10	1.5														
Total Pressure Drop ⁽¹⁰⁾ For ISO Class 2.5.1 air	barG / (psig)	0.41	6	0.34	5														

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 PN8NTC2.3, with +/- 3 dB(A) tolerance.
- (3) 40% Relative Humidity Inlet Air (For alternate conditions refer to SSR toolbox or contact IR)
- (4) Motor test certificate
- (5) Inrush amps
- (6) 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.
- (7) Recommended Time delay Fuse. Refer to local code for proper fuse sizing
- (8) Measured at rated compressor duty
- (9) Installation kit will provide flexible connection to NPT or BSPT
- (10) Total Air System package including compressor, integral dryer with pre and final compressed air filters
- (11) 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) Discharge pressure when operating at compressor rated pressure, with clean wetted filters