



**CAGI VERIFICATION PROGRAM**  
**A Program of the Compressed Air and Gas Institute**  
**RESULTS OF TEST OF AN AIR Dryer (RD-VP8)**

<b>MANUFACTURER: SULLAIR</b>	<b>TRADE NAME: SULLAIR</b>
<b>UNIT MODEL NO.: RD-400-460-3-60-A</b>	<b>SERIAL NO.: 3614SA01284</b>
<b>Refrigerant Type: R134a</b>	<b>CAGI TEST NO.: RD-14001Q-1</b>
<b>UNIT TYPE: Non-Cycling</b>	<b>DATE(S) OF TEST: 1-14-15</b>

**SUMMARY**

TEST PARAMETER	CERTIFIED	MEASURED	CERTIFIED VS. MEASURED	RESULT OF TEST
<b>FULL FLOW RATINGS*</b>				
RATED AIR FLOW, SCFM	400.00	393.52	98%	-
OUTLET PRESSURE DEWPOINT, °F*	39.50	43.10	3.60	P
SYSTEM PRESSURE DROP, PSI	3.0	3.3	0.3	P
TOTAL POWER INPUT, KW	3.40	2.71	80%	-
Specific Power Input At Full Flow, KW / 100 CFM	0.85	0.69	81%	P
<b>10% FLOW RATINGS*</b>				
RATED AIR FLOW, SCFM	40.00	40.90	102%	-
OUTLET PRESSURE DEWPOINT, °F*	33.00	36.30	3.30	P
SYSTEM PRESSURE DROP, PSI	0.50	0.06	-0.44	P
TOTAL POWER INPUT, KW	3.20	2.41	75%	-
Specific Power Input At Full Flow, KW / 100 CFM	8.00	5.88	74%	P

Allowable Tolerance Table\*

Volume Flow Rate at Specified Conditions		Pressure Dew Point	Specific Energy Consumption	System Pressure Drop, PSI
Cu. M / min	Cu. Ft / min		%	
Below 0.5	Below 15		+8	
0.5 to 1.5	15 to 50	+4 °F	+ 7	+1
1.5 to 15	50 to 500		+ 6	
Above 15	Above 500		+ 5	

**Remarks: UUT passed the verification points on the test data sheet for Full Flow and 10% flow.**

<b>CODE:</b>	<b>MD</b> - Model Discontinued	<b>RTM</b> - Returned to Mfg.	<b>P</b> - Passed	<b>ND</b> - No Decision
	<b>TBR</b> - To Be Recertified	<b>F</b> - Failed	<b>SR</b> - See "Remarks"	<b>NP</b> - Not Performed

Report Prepared by: Donald Hubbard  
 Title: Project Engineer  
 Date: 1/21/15  
 Signal:

Report Reviewed by: Chris Haws  
 Date: 1/28/2015  
 Signature:



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**01.0 Dryer Data Sheet**

Data sheet linked to CAGI during selections

**DRYER DATA SHEET  
 Refrigerant Dryers**

<b>MODEL DATA</b>				
1	Manufacturer	SULLAIR		
2	Date	26 NOVEMBER 2014		
3	Model Number	RD400		
4	Cycling/Non-Cycling	NON-CYCLING		
5	Refrigerant Type	R134A		
	<b>DESCRIPTION</b>	<b>FULL FLOW</b>	<b>10% FLOW</b>	<b>UNITS</b>
6	Tested Flow <sup>a</sup>	400	40	scfm <sup>b</sup>
7	Outlet Pressure Dewpoint	39,5	33	°F
8	Pressure Drop	3	0,5	psi(d)
9	Total Dryer Input Power	3,4	3,2	kW
10	Specific Package Power <sup>c</sup>	0,85	8	kW/100 scfm

Notes:

a. Dryer ratings at the following inlet conditions to the dryer (as per IS O 7183, Table 2, Option A2):

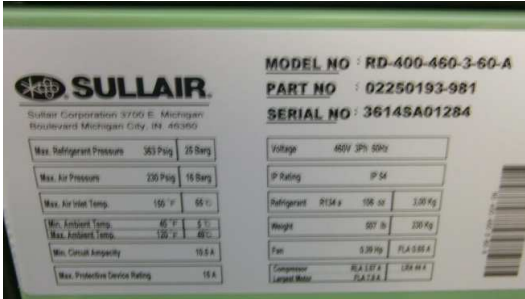
- Inlet Compressed Air Temperature: 100°F (38°C)
- Inlet Compressed Air Pressure: 100 psig (7 Bar)
- Max. Ambient Air Temperature: 100°F (38°C)
- Inlet Compressed Air Relative Humidity 100% (Saturated)

b. SCFM defined as the volume of free air in cubic feet per minute measured at 14.5 psia (1.0 Bar), 68°F (20°C) temperature and 0% R.H. (0 WVP).

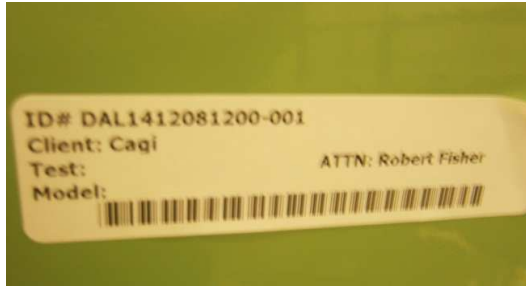
c. (Total Dryer Input Power/tested flow) x 100

**02.0 Images**

**Photo #1 Test unit nameplate**



**Photo #2 Test unit ID number**



**Photo #3 Compressor nameplate**



**Photo #4 Fan motor nameplate**



**02.1 Images Continued**

**Photo #5 Test unit set-up**



**Photo #6 Test unit set-up**



**Photo #7 Test unit set-up**



**Photo #7 Test unit set-up**



Project Number	G101066500	Time	11:22:28
Psy Room	35Ton	Test Number	1
Test Type	Full Flow	Test Standard	ISO 7183
Dryer Model	RD-400-460-3-60-A	Engineer	Robert Fisher
Dryer Serial	3614SA01284	Tech	Joshua Watson
Rated Operating PSI	100	Conditions	100/100/100
Dryer Type	Refrigeration	Volt Min	460
Cycling Type	Non-Cycling	Volt Max	460
Refrigerant Type	R134a	Phase	1
Refrigerant Charge	106 oz.		

	Average Data	Min Data	Max Data	Units
Dryer Amb Dry	99.07	98.85	99.60	°F
Dryer Amb Wet	63.59	63.06	64.12	°F
Dryer Amb Humidity	11.60	10.80	12.70	%
Comp Amb Dry	83.39	82.69	84.53	°F
Comp Amb Wet	59.31	57.24	60.53	°F
Comp Amb Humidity	22	18	25	%
Comp Disch	99.5	94.2	100.8	PSIG
Inlet Dew Point	95.50	92.60	98.30	°F
Dryer Inlet Temp	97.40	96.00	99.50	°F
Dryer Outlet Temp	86.10	84.50	88.20	°F
Outlet Dew Point	43.10	41.60	44.60	°F
Pressure Drop	3.3	3.1	3.6	psi(d)
Dryer Inlet	99.3	94.1	100.7	PSIG
Airflow	393.5	374.2	399.2	SCFM
Barometric	29.635	29.619	29.652	" Hg
Main Watts	2.71	2.66	2.76	kW
Specific Power	0.69	0.67	0.73	kW/100 scfm
Dryer Comp Disch	176.11	174.48	178.44	°F
Dryer Leav Cond Coil	120.30	118.83	121.82	°F
Dryer Comp Suction	57.83	52.88	62.93	°F

Comments: Non Cycling 400 scfm Full flow

Project Number	G101066500	Time	11:22:28
Psy Room	35Ton	Test Number	1
Test Type	Full Flow	Test Standard	ISO 7183
Dryer Model	RD-400-460-3-60-A	Engineer	Robert Fisher
Dryer Serial	3614SA01284	Tech	Joshua Watson
Rated Operating PSI	100	Conditions	100/100/100
Dryer Type	Refrigeration	Volt Min	460
Cycling Type	Non-Cycling	Volt Max	460
Refrigerant Type	R134a	Phase	1
Refrigerant Charge	106 oz.		

	Average Data	Min Data	Max Data	Units
Dryer Amb Dry	99.24	99.02	99.38	°F
Dryer Amb Wet	64.83	64.62	65.16	°F
Dryer Amb Humidity	13.50	13.00	14.20	%
Comp Amb Dry	88.06	87.81	88.33	°F
Comp Amb Wet	60.65	60.32	61.07	°F
Comp Amb Humidity	18	18	19	%
Comp Disch	99.4	94.9	100.6	PSIG
Inlet Dew Point	98.30	96.80	100.40	°F
Dryer Inlet Temp	99.50	99.10	100.10	°F
Dryer Outlet Temp	95.70	95.20	96.30	°F
Outlet Dew Point	36.30	35.20	37.20	°F
Pressure Drop	0.1	0.0	0.2	psi(d)
Dryer Inlet	99.2	94.6	100.4	PSIG
Airflow	40.9	39.4	41.3	SCFM
Barometric	29.698	29.690	29.707	" Hg
Main Watts	2.41	2.34	2.47	kW
Specific Power	5.88	5.68	6.25	kW/100 scfm
Dryer Comp Disch	163.61	161.36	165.00	°F
Dryer Leav Cond Coil	107.70	105.94	109.39	°F
Dryer Comp Suction	46.96	32.38	56.66	°F

**04.0 Critical Components Impacting Dryer Performance**

<b>Dryer Description:</b>
Manufacturer: Sullair
Model No: RD-400-460-3-60-A
Serial No: 3614SA01284
<input checked="" type="checkbox"/> Air-Cooled <input type="checkbox"/> Cycling <input type="checkbox"/> Water-Cooled
Volts: 460
Amps: 15
Phase: 3
Hertz: 60
Refrigerant type: R134A

<b>Dryer Motor Description:</b>
Manufacturer: Copeland Scroll
Model No: ZR40K3E-TFD-522
Serial No: 12K281180
Volts: 460
Amps: 3.57
Phase: 3
Hertz: 60
RPM: ---
HP: ---

<b>Fan Motor Description</b>
Manufacturer: ZIEHL-ABEGG
Model No: FNO35-4DKOFV7P2
Part No: 159756
Volts: 460
Amps: 48
Phase: 3
Hertz: 60
RPM: 1630
HP: -----

<b>Filled out by: DM</b>
<b>Date: 1-12-15</b>

06.0 Revision Summary				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change