ENGINEERING DATA SHEET

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Sheet: 1 of 2
Date: October 21, 2016

RS37ie

Total Air System [TAS]

60Hz

Model			RS37ie-A103-TAS	RS37ie-A118-TAS	RS37ie-A138-TAS	RS37ie-A193-TAS
GENERAL PERFORMANCE DATA						
Maximum Target Operating Pressure	(2)	barg (psig)	7.1 (103)	8.1 (118)	9.5 (138)	13.3 (193)
Rated Discharge Pressure		barg (psig)	6.9 (100)	7.9 (115)	9.3 (135)	13.1 (190)
Minimum Operating Pressure		barg (psig)	4.5 (65)	4.5 (65)	4.5 (65)	4.5 (65)
Maximum Operating Ambient Temperature		°C (°F)	46 (115)	46 (115)	46 (115)	46 (115)
Minimum Operating Ambient Temperature		°C (°F)	2 (36)	2 (36)	2 (36)	2 (36)
Maximum System Temperature Setting		°C (°F)	109 (228)	109 (228)	109 (228)	109 (228)
Nominal Power - Main Motor		kW (HP)	37 (50)	37 (50)	37 (50)	37 (50)
Main Motor Efficiency	(3)	%	94.5%	94.5%	93.0%	93.0%
Capacity FAD	(1)	m^3/min (CFM)	7.1 (250)	6.9 (245)	6.2 (217)	4.9 (173)
Package Input Power with Fan and Dryer- Air Cooled	(4)	kW	46.2	47.6	48.3	47.7
Specific Power - Air Cooled	(4)(5)	kW/m^3/min (kW/100CFM)	6.5 (18.5)	6.9 (19.4)	7.9 (22.2)	9.8 (27.6)
SOUND LEVEL	(6)					
Noise Level Standard Package - Air Cooled		Sound Pressure - dB(A)	72	72	72	72
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	89	89	89	89
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)						
Heat Removal (Oil Cooler)		kW (1000 Btu/hr)	33.2 (113)	34.8 (119)	35.3 (120)	36.8 (126)
Heat Removal (Oil and Aftercooler)		kW (1000 Btu/hr)	45.6 (156)	47.1 (161)	46.7 (159)	45.2 (154)
Heat Removal (Dryer)		kW (1000 Btu/hr)	5.8 (20)	5.8 (20)	5.8 (20)	5.8 (20)
Permitted Additional Static Pressure		Pa (in H_2O)	63 (.25)	63 (.25)	63 (.25)	63 (.25)
Fan Air Flow		m^3/min (CFM)	108 (3826)	108 (3826)	108 (3826)	108 (3826)
Fan Motor Nominal Power		kW	1.1	1.1	1.1	1.1
Cooling Air Temperature Rise		°C (°F)	23 (41)	24 (42)	23 (42)	23 (41)
Aftercooler CTD	(7)	°C (°F)	11 (19)	11 (19)	11 (19)	11 (19)
AIR END DATA						
Male Rotor Speed		RPM	3211	3092	2837	2375
Tip Speed Rotor		m/sec	23.03	22.18	20.35	17.04
Full Load Shaft Power		kW	40.0	41.4	41.3	40.8
COOLANT LUBRICATION DATA						
Total Coolant Capacity - Air Cooled		litres (US gal)	24 (6.3)	24 (6.3)	24 (6.3)	24 (6.3)
PIPING CONNECTIONS						
Air Discharge		Inches NPT	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)
Package Automatic Condensate Drain		Inches NPT	.375 INCH (FEMALE)	.375 INCH (FEMALE)	.375 INCH (FEMALE)	.375 INCH (FEMALE)
Coolant Drain - Hose Size		Inches	0.88	0.88	0.88	0.88
Diameter of Power Inlet		mm (Inches)	120 (4.7)	120 (4.7)	120 (4.7)	120 (4.7)
DIMENSIONS AND WEIGHT						
Length, Width, Height		mm (inches)	1947, 1152, 1660 (76.7, 45.4, 65.4)	1947, 1152, 1660 (76.7, 45.4, 65.4)	1947, 1152, 1660 (76.7, 45.4, 65.4)	1947, 1152, 1660 (76.7, 45.4, 65.4)
Net Weight - Air Cooled		kg (lb.)	1315 (2899)	1315 (2899)	1299 (2864)	1299 (2864)
GA Drawing Number - Air Cooled			47528659	47528659	47528659	47528659
ELECTRICAL DATA	(13)					
Motor Protection			TEFC, IP55	TEFC, IP55	TEFC, IP55	TEFC, IP55
Full Load Package Current - Air Cooled	(9)	Amps @ 200V	176	182	173	171
		Amps @ 230V	153	158	150	149
		Amps @ 380V	93	96	91	90
		Amps @ 460V	77	79	75	75
		Amps @ 575V	62	64	60	60
Main Motor Locked Rotor Current	(10)(14)(15)	Amps @ 200V	1211	1211	1493	1493
		Amps @ 230V	1053	1053	1436	1436
		Amps @ 380V	638	638	869	869
		Amps @ 460V	527	527	718	718
		Amps @ 575V	422	422	550	550
Package Power Factor			0.84	0.84	0.89	0.89
Electrical Installation						
Recommended Supply Cable Size	(10)	mm²/Cu (AWG) @ 200V	150 (2/0)	120 (2/0)	150 (2/0)	120 (2/0)
		mm²/Cu (AWG) @ 230V	120 (1/0)	120 (1/0)	120 (1/0)	120 (1/0)
		mm²/Cu (AWG) @ 380V	70 (3 AWG)	70 (3 AWG)	70 (3 AWG)	70 (4 AWG)
		mm²/Cu (AWG) @ 460V	70 (4 AWG)	70 (4 AWG)	70 (4 AWG)	70 (4 AWG)
		mm²/Cu (AWG) @ 575V	25 (6 AWG)	35 (6 AWG)	35 (6 AWG)	25 (6 AWG)
Maximum Recommended Fuse Rating	(10)(11)	Amps @ 200V	300	300	300	300
		Amps @ 230V	250	250	250	250
		Amps @ 380V	150	150	150	150
		Amps @ 460V	125	125	125	125
		Amps @ 575V	100	100	100	100

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60Hz

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Refrigerated Dryer Data					
Refrigerant Type		R134a	R134a	R134a	R134a
Refrigerant Quantity	Grams (Ounces)	1,300 (46)	1,300 (46)	1,300 (46)	1,300 (46)
Fan Air Flow	m³/min (CFM)	52 (1825)	52 (1825)	52 (1825)	52 (1825)

	ISO Class	**Particles**			**Humidity and Liquid Water**	**Total Oil**
Filter Data	(Particles.Humidity and Liquid Water.Oil)	*[0.1 - 0.5 µ m]*	*[0.5 - 1µm]*	*[1 - 5µm]*		
ISO Class Data	1.4.1	≤20.000	≤400	≤10	≤+3°C	≤0.01 mg/m³

Notes:

1. FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C
2. Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
3. IE3 efficiency motor
4. Measured at rated capacity and rated pressure
5. Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
6. Measured in free field conditions per ISO 2151 using Hemispherical Method; ducted inlet and outlet, with + 3 dB(A) tolerance
7. CTD based on 100°F/38°C inlet air at 40% Relative Humidity (For alternate conditions contact Ingersoll Rand)
8. BSPT or NPT, depending on regional standard
9. Maximum current includes 10% additional current due to fouled filters and elements
10. 90°C copper cables. Always apply local electrical codes for sizing cables and system protection
11. Time delay fuse recommended. Apply local electrical codes for fuse sizing
12. Coolant volumes listed are approximate. See operator manual for coolant fill proceedure
13. 60Hz (±0.5%) motor voltage tolerance: (208)±10% ; (220)±10% ; (230)±10% ; (380)-6/+10% ; (440) ±10% ; (460) ±10% ; (575) -6/+10%
14. Star-Delta starting current inrush is about 33% of direct starting current
15. During the Star-Delta open-starting transition, the in-rush current value could instantaneously peak from 1.8 to 2.8 times the noted Locked-Rotor-Amperage (LRA) values
16. TAS units deliver ISO Class 1-5-1 quality air measured at steady state conditions in accordance with ISO 8573-1:2010, with inlet air to package of 25°C (77°F) and RH of 60%