



ENGINEERING DATA SHEET

RS30i
Total Air System (TAS)
60Hz

CCN: 49187115
Rev: F
ECN: 1145842
Sheet: 1 of 2
Date: October 21, 2016

Model		RS30-A103-TAS	RS30-A118-TAS	RS30-A138-TAS	RS30-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)	30 (40)	30 (40)	30 (40)	30 (40)
Main Motor Efficiency	(3)	%	94.1%	94.1%	92.4%	92.4%
Capacity FAD	(1)	m ³ /min (CFM)	5.6 (196)	5.2 (184)	4.7 (164)	3.7 (132)
Package Input Power with Fan - Air Cooled	(4)	kW	38.7	38.6	37.9	38.5
Specific Power - Air Cooled	(4)(5)	kW/m ³ /min (kW/100CFM)	6.97 (19.7)	7.41 (21.0)	8.15 (23.1)	10.32 (29.2)
SOUND LEVEL						
Noise Level Standard Package - Air Cooled	(6)	Sound Pressure - dB(A)	69	69	69	69
Noise Level Standard Package - Air Cooled		Sound Power - dB(A)	85	85	85	85
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)						
Heat Removal (Oil Cooler)		kW (1000 Btu/hr)	29.5 (101)	29.7 (101)	28.3 (96)	29.5 (101)
Heat Removal (Oil and Aftercooler)		kW (1000 Btu/hr)	37.7 (129)	37.6 (128)	35.9 (123)	36.0 (123)
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 ₂ O)	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)	19 (34)	19 (34)	18 (32)	18 (32)
Aftercooler CTD	(7)	°C (°F)	10.5 (19)	10.5 (19)	10.5 (19)	10.5 (19)
AIR END DATA						
Main Rotor Speed		RPM	2574	2483	2213	1903
Tip Speed Rotor		m/sec	18.47	17.81	15.88	13.65
Full Load Shaft Power		kW	33.3	33.3	32.0	32.6
COOLANT LUBRICATION DATA						
Total Coolant Capacity - Air Cooled	(12)	litres (US gal)	15.4 (4.1)	15.4 (4.1)	15.4 (4.1)	15.4 (4.1)
PIPING CONNECTIONS						
Air Discharge	(8)	Inches NPT	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)	1.5 INCH (FEMALE)
Package Automatic Condensate Drain		Inches NPT	.25 INCH (FEMALE)	.25 INCH (FEMALE)	.25 INCH (FEMALE)	.25 INCH (FEMALE)
Coolant Drain - Hose Size		Inches	0.875	0.875	0.875	0.875
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)	1937, 1056, 1534 (76, 42, 60)	1937, 1056, 1534 (76, 42, 60)	1937, 1056, 1534 (76, 42, 60)	1937, 1056, 1534 (76, 42, 60)
Net Weight - Air Cooled		kg (lb.)	1150 (2535)	1150 (2535)	1142 (2518)	1142 (2518)
GA Drawing Number - Air Cooled			49182587	49182587	49182587	49182587
ELECTRICAL DATA						
Motor Protection	(13)		TEFC, IP55	TEFC, IP55	TEFC, IP55	TEFC, IP55
Full Load Package Current - Air Cooled	(9)	Amps @ 200V	148	147	137	140
		Amps @ 230V	128	128	119	121
		Amps @ 380V	78	78	72	74
		Amps @ 460V	64	64	60	61
		Amps @ 575V	52	52	48	49
Main Motor Locked Rotor Current	(10)(14)(15)	Amps @ 200V	1008	1008	1269	1269
		Amps @ 230V	877	877	1103	1103
		Amps @ 380V	531	531	668	668
		Amps @ 460V	439	439	552	552
		Amps @ 575V	351	351	442	442
Package Power Factor			0.84	0.84	0.88	0.88
Electrical Installation						
Recommended Supply Cable Size	(10)	mm ² /Cu (AWG) @ 200V	50 (1/0)	50 (1/0)	50 (1/0)	50 (1/0)
		mm ² /Cu (AWG) @ 230V	35 (1 AWG)	35 (1 AWG)	35 (1 AWG)	35 (2 AWG)
		mm ² /Cu (AWG) @ 380V	25 (4 AWG)	25 (4 AWG)	25 (4 AWG)	25 (4 AWG)
		mm ² /Cu (AWG) @ 460V	16 (6 AWG)	16 (6 AWG)	16 (6 AWG)	16 (6 AWG)
		mm ² /Cu (AWG) @ 575V	10 (8 AWG)	10 (8 AWG)	10 (8 AWG)	10 (8 AWG)
Maximum Recommended Fuse Rating	(10)(11)	Amps @ 200V	250	250	250	225
		Amps @ 230V	200	200	200	200
		Amps @ 380V	125	125	125	125
		Amps @ 460V	100	100	100	100
		Amps @ 575V	80	80	80	80



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Refrigerated Dryer Data

		R404a	R404a	R404a	R404a
Refrigerant Type					
Refrigerant Quantity	Grams (Ounces)	1,600 (56)	1,600 (56)	1,600 (56)	1,600 (56)
Fan Air Flow	m ³ /min (CFM)	61 (2137)	61 (2137)	61 (2137)	61 (2137)

Filter Data	ISO Class (Particles, Humidity and Liquid Water, Oil)	Particles			Humidity and Liquid Water	Total Oil
		[0.1 - 0.5µm]	[0.5 - 1µm]	[1 - 5µm]		
ISO Class Data	1.5-1	≤100	≤1	≤0	≤+7°C	≤0.01 mg/m ³

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 procedure.
- (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-Ampereage (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%.

Product Improvement is a continuing goal at Ingersoll Rand. Design and specifications are subject to change without notice or obligation.