



ENGINEERING DATA SHEET

RS18i
Total Air System (TAS)
60Hz

CCN: 47648971001
Rev.: B
ECN: 1344947
Sheet: 1 of 2
Date: Mar-2019

Model		RS18i-A103-TAS	RS18i-A118-TAS	RS18i-A138-TAS	RS18i-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)	40 (104)	40 (104)	40 (104)	40 (104)
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)	19 (25)	19 (25)	19 (25)	19 (25)
Main Motor Efficiency	⁽³⁾ %	93.6%	93.6%	93.6%	93.6%
Capacity FAD	⁽¹⁾ m ³ /min (CFM)	3.21 (113)	3.03 (107)	2.80 (99)	2.29 (81)
Package Input Power with Fan - Air Cooled	⁽⁴⁾⁽¹⁷⁾ kW	23.42	23.67	23.44	23.90
Dryer Input Power with Fan - Air Cooled	⁽⁴⁾ kW	0.95	0.95	0.95	0.95
Specific Power - Air Cooled	⁽⁴⁾⁽⁵⁾⁽¹⁷⁾ kW/m ³ /min (kW/100CFM)	7.29 (20.65)	7.82 (22.14)	8.37 (23.69)	10.45 (29.59)
SOUND LEVEL					
Noise Level Standard Package - Air Cooled	⁽⁶⁾ Sound Pressure - dB(A)	74	74	74	74
Noise Level Standard Package - Air Cooled	Sound Power - dB(A)	90	90	90	90
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)					
Heat Removal (Oil Cooler)	kW (1000 Btu/hr)	19.8 (67)	20.2 (69)	20.2 (69)	21.1 (72)
Heat Removal (Oil and Aftercooler)	kW (1000 Btu/hr)	23.5 (80)	23.8 (81)	23.7 (81)	24.2 (83)
Heat Removal (Dryer)	kW (1000 Btu/hr)	3.5 (12)	3.5 (12)	3.5 (12)	3.5 (12)
Permitted Additional Static Pressure	Pa (in H ₂ O)	63 (25)	63 (25)	63 (25)	63 (25)
Fan Air Flow	m ³ /min (CFM)	65 (2295)	65 (2295)	65 (2295)	65 (2295)
Fan Motor Nominal Power	kW	0.5	0.5	0.5	0.5
Cooling Air Temperature Rise @ 30°C	°C (°F)	17 (31)	17 (31)	17 (31)	17 (31)
Aftercooler CTD	⁽⁷⁾ °C (°F)	11 (20)	11 (20)	11 (19)	9 (16)
AIR END DATA					
Male Rotor Speed	RPM	4112	3902	3649	3081
Tip Speed Rotor	m/sec	23.01	21.83	20.42	17.24
Full Load Shaft Power	kW	21.0	21.2	21.0	21.5
COOLANT LUBRICATION DATA					
Total Coolant Capacity - Air Cooled	⁽¹²⁾ litres (US gal)	11 (2.9)	11 (2.9)	11 (2.9)	11 (2.9)
PIPING CONNECTIONS					
Air Discharge	⁽⁸⁾ Inches NPT	1.0" INCH (FEMALE)	1.0" INCH (FEMALE)	1.0" INCH (FEMALE)	1.0" 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 NPT	.375 INCH (FEMALE)	.375 INCH (FEMALE)	.375 INCH (FEMALE)	.375 INCH (FEMALE)
Diameter of Power Inlet	mm (Inches)	64 (2.5)	64 (2.5)	64 (2.5)	64 (2.5)
DIMENSIONS AND WEIGHT					
Length, Width, Height	mm (inches)	1520, 800, 1300 (59.8, 31.5, 51.2)	1520, 800, 1300 (59.8, 31.5, 51.2)	1520, 800, 1300 (59.8, 31.5, 51.2)	1520, 800, 1300 (59.8, 31.5, 51.2)
Net Weight - Air Cooled	kg (lb.) - (Base Mounted)	653 (1440)	653 (1440)	654 (1442)	656 (1446)
GA Drawing Number - Air Cooled	Base Mounted	47637548001	47637548001	47637548001	47637548001
	Receiver Mounted	47637549001	47637549001	47637549001	47637549001
ELECTRICAL DATA					
Motor Protection	⁽¹³⁾	TEFC, IP55	TEFC, IP55	TEFC, IP55	TEFC, IP55
Full Load Package Current - Air Cooled	⁽⁹⁾ Amps @ 200V	94	94	94	94
	Amps @ 230V	81	81	81	81
	Amps @ 460V	43	43	43	43
	Amps @ 575V	35	35	35	35
Main Motor Locked Rotor Current	⁽¹⁴⁾ Amps @ 200V	671	671	671	671
	Amps @ 230V	583	583	583	583
	Amps @ 460V	294	294	294	294
	Amps @ 575V	235	235	235	235
Package Power Factor		0.78	0.78	0.78	0.78
Full Load Dryer Current - Air Cooled	Amps @ 115V	17.00	17.00	17.00	17.00
Electrical Installation					
Recommended Supply Cable Size	⁽¹⁰⁾ mm ² /Cu (Kcmil) @ 200V	16 (26)	16 (26)	16 (26)	16 (26)
	mm ² /Cu (Kcmil) @ 230V	16 (26)	16 (26)	16 (26)	16 (26)
	mm ² /Cu (Kcmil) @ 460V	10 (17)	10 (17)	10 (17)	10 (17)
	mm ² /Cu (Kcmil) @ 575V	6 (10)	6 (10)	6 (10)	6 (10)
Recommended Supply Cable Size Dryer	mm ² /Cu (Kcmil) @ 115V	3 (10)	3 (10)	3 (10)	3 (10)
Maximum Recommended Fuse Rating	⁽¹⁰⁾⁽¹¹⁾ Amps @ 200V	175	175	175	175
	Amps @ 230V	150	150	150	150
	Amps @ 460V	70	70	70	70
	Amps @ 575V	60	60	60	60
Maximum recommended Fuse rating dryer	Amps @ 115V	25	25	25	25



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Refrigerated Dryer Data				
Refrigerant Type		R134a	R134a	R134a
Refrigerant Quantity	Grams (Ounces)	REFER LABEL	REFER LABEL	REFER LABEL
Fan Air Flow	m ³ /min (CFM)	27 (942)	27 (942)	27 (942)
Filter Data	ISO Class (Particles, Humidity and Liquid Water, Oil)	Particles		
ISO Class Data	(16) 1.5.2	[0.1 - 0.5 μm]	[0.5 - 1 μm]	[1 - 5 μm]
		≤20000	≤400	≤10
				Humidity and Liquid Water
				≤+7 °C
				Total Oil
				≤0.1

Notes:

- FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex C
- Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
- IE3 efficiency motor
- Measured at rated capacity and rated pressure
- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex C
- Measured in free field conditions per ISO 2151 using Hemispherical Method; ducted inlet and outlet, with + 3 dB(A) tolerance
- CTD based on 100°F/38°C inlet air at 40% Relative Humidity (For alternate conditions contact Ingersoll Rand)
- BSP or NPT, depending on regional standard
- Maximum current includes 10% additional current due to fouled filters and elements
- 90°C copper cables. Always apply local electrical codes for sizing cables and system protection
- Time delay fuse recommended. Apply local electrical codes for fuse sizing
- Coolant volumes listed are approximate. See operator manual for coolant fill procedure
- 60Hz (±0.5%) motor voltage tolerance: (208)±10% ; (220)±10% ; (230)±10% ; (380)-6/+10% ; (440) ±10% ; (460) ±10% ; (575) -6/+10%
- Star-Delta starting current inrush is about 33% of direct starting current
- 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
- TAS units deliver ISO Class 1-5-2 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%
- Dryer power is excluded in calculation.

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