



ENGINEERING DATA SHEET

R7.5i (IE3) Total Air System (TAS) 60Hz

CCN: 47523361001
Rev.: E
ECN: 1082712
Sheet: 1 of 2
Date: 13-Mar-2017

Model Name		R7.5i-X100	R7.5i-X115	R7.5i-X135	R7.5i-X190			
GENERAL PERFORMANCE DATA								
Maximum Operating Pressure (2)	barg (psig)	7 (103)	8 (118)	9.5 (138)	13.5 (193)			
Rated Discharge Pressure	barg (psig)	7 (100)	8 (115)	9.5 (135)	13.5 (190)			
Minimum Operating Pressure	barg (psig)	4.5 (65)	4.5 (65)	4.5 (65)	4.5 (65)			
Capacity FAD (1)	m ³ /min (CFM)	1.13 (39.8)	1.04 (36.7)	0.94 (33.4)	0.72 (25.3)			
Maximum Operating Ambient Temperature	°C (°F)			40 (104)				
Minimum Operating Ambient Temperature	°C (°F)			2 (35)				
Maximum System Temperature Setting	°C (°F)			109 (228)				
Nominal Power - Main Motor	kW (HP)			7.5 (10)				
Main Motor Efficiency (3)	Percent			90.2%				
Package Input Power - Air Cooled (4)	kW	10.66	10.72	10.76	10.77			
Package Input Power - Air Cooled - No Loaded	kW	6.20	5.60	5.30	4.40			
Specific Power - Air Cooled (4)(5)	kW/m ³ /min (kW/100cfm)	9.45 (26.8)	10.32 (29.2)	11.39 (32.2)	15.05 (42.6)			
SOUND LEVEL (6)								
Standard Package - Air Cooled	dB(A)			69				
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)								
Heat Removal Oil Cooler	kW (1000 Btu/hr)	7.7 (26.3)	7.8 (26.6)	7.9 (27.0)	8.0 (27.3)			
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	9.1 (31.1)	9.1 (31.1)	9.2 (31.4)	9.0 (30.7)			
Additional Static Pressure (15)	Pa (in H ₂ O)			See Document 23883374				
Fan Air Flow - Compressor	m ³ /min (CFM)			34.0 (1200)				
- Dryer	m ³ /min (CFM)			15.3 (541)				
Fan Motor Nominal Power - Compressor	kW			0.3				
Fan Motor Efficiency - Compressor	Percent			71.0%				
Cooling Air Temperature Rise	°C (°F)	25 (45)	25 (45)	25 (45)	25 (45)			
Aftercooler CTD(7)	°C (°F)	7.5 (13.5)	7.5 (13.5)	7.5 (13.5)	7.5 (13.5)			
AIR END DATA								
Male Rotor Speed	rpm	4630	4356	4046	3291			
Tip Speed Rotor	m/sec	18.00	16.93	15.73	12.79			
Full Load Shaft Power	kW	8.36	8.42	8.45	8.46			
COOLANT LUBRICATION DATA								
Total Coolant Capacity - Air Cooled	litres (US gal)			5 (1.32)				
PIPING CONNECTIONS								
Air Discharge	Inches NPT			0.75				
Package Automatic Condensate Drain(8)	mm			10				
Coolant Drain - Hose Size	Inches			0.88				
Diameter of Power Inlet	mm / inch			M32 gland cable (cable diameters 12-21mm / 0.47-82")				
DIMENSIONS & WEIGHT								
		Receiver 120gal / 80gal						
Length / Width / Height	mm (inches)	1843(72.55)x764(30)x1808.5(71.2) / 1740.5(68.5)x764(30)x1706.5(67.2)						
Net Weight - Air Cooled	kg (lb.)	497 (1096) / 465 (1025)						
GA Drawing Number - Air Cooled		47518742 / 47518743						
ELECTRICAL DATA ⁽¹⁴⁾								
Motor Enclosure Protection		208V 3Φ IP55	220V 3Φ IP55	230V 3Φ IP55	380V 3Φ IP55	440V 3Φ IP55	460V 3Φ IP55	575V 3Φ IP55
Full Load Package Current - Air Cooled (10)	Amps	41.8	39.9	38	23	20	19	15.1
Package Locked Rotor Current	Amps	459.8	359.1	418.0	207.9	180.0	210.1	132.9
Package Power Factor		0.86	0.85	0.78	0.85	0.85	0.75	0.84
Electrical Installation								
Recommended Supply Cable Size (11)	mm ² /Cu (AWG or kcmil)	6 (AWG8)	6 (AWG8)	6 (AWG8)	2.5 (AWG12)	2.5 (AWG12)	2.5 (AWG12)	1.5 (AWG14)
Maximum Recommended Fuse Rating ⁽¹¹⁾⁽¹²⁾	Amps	63	63	63.0	40.0	32.0	32.0	25.0



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Refrigerated Dryer Data		ISO Class		
Pressure Dew Point ISO Class(16)	°C (°F)	5		
Refrigerant Weight of R134a	Grams(oz)	320(11.29)		
Filter Data		Particulate	Liquid	
	ISO Class	Filtration	ISO Class	Filtration
Filter Detail - at 21°C (70°F)	1	0.01 micron	1	0.01 mg/m ³ (0.1 ppm)

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) 40% Relative Humidity Inlet Air and maximum speed (For alternate conditions contact Ingersoll Rand)
- (8) Draining port Include push-in connector for nylon tubing
- (10) Maximum current includes 10% additional current due to fouled filters and elements
- (11) 90°C copper cables. Always apply local electrical codes for sizing cables and fusing.
- (12) Time delay fuse recommended. Apply local electrical codes for fuse sizing
- (13) Coolant volumes listed are approximate. See operator manual for coolant fill procedure.
- (14) Voltage tolerance: (380) ±6% ; (440,460, 575) ±10%
- (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.