



ENGINEERING DATA SHEET

RS220
60Hz

CCN: 47584712001
Rev.: D
ECN: 1273617
Sheet: 1 of 2
Date: Nov-2017

Model		RS220I-A110	RS220I-A125	RS220I-A145
GENERAL PERFORMANCE DATA				
Maximum Target Operating Pressure	⁽²⁾ barg (psig)	7.6 (110)	8.6 (125)	10.0 (145)
Rated Discharge Pressure	barg (psig)	6.9 (100)	7.9 (115)	9.3 (135)
Minimum Operating Pressure	barg (psig)	4.5 (65)	4.5 (65)	4.5 (65)
Maximum Operating Ambient Temperature	°C (°F)	46 (115)	46 (115)	46 (115)
Minimum Operating Ambient Temperature	°C (°F)	2 (36)	2 (36)	2 (36)
Maximum System Temperature Setting	°C (°F)	109 (228)	109 (228)	109 (228)
Nominal Power - Main Motor	kW (HP)	224 (300)	224 (300)	224 (300)
Main Motor Efficiency	⁽³⁾ %	96.2%	96.2%	96.2%
Capacity FAD	⁽¹⁾ m ³ /min (CFM)	46.5 (1642)	44.7 (1579)	39.9 (1409)
Package Input Power with Fan - Air Cooled	⁽⁴⁾ kW	267.8	271.9	262.4
Specific Power - Air Cooled	⁽⁴⁾⁽⁵⁾ kW/m ³ /min (kW/100CFM)	5.8 (16.3)	6.1 (17.2)	6.6 (18.6)
SOUND LEVEL				
Noise Level Standard Package - Air Cooled	⁽⁶⁾ Sound Pressure - dB(A)	75	75	75
Noise Level Standard Package - Air Cooled	Sound Power - dB(A)	95	95	95
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)				
Heat Removal (Oil Cooler)	kW (1000 Btu/hr)	213.6 (729)	218.9 (747)	213.3 (728)
Heat Removal (Oil and Aftercooler)	kW (1000 Btu/hr)	282.8 (965)	286.0 (976)	274.8 (938)
Permitted Additional Static Pressure	Pa (in H ₂ O)	63 (.25)	63 (.25)	63 (.25)
Fan Air Flow	m ³ /min (CFM)	453 (15998)	453 (15998)	453 (15998)
Fan Motor Nominal Power	kW	8.0	8.0	8.0
Cooling Air Temperature Rise @ 30°C	°C (°F)	29 (52)	29 (53)	28 (51)
Aftercooler CTD	⁽⁷⁾ °C (°F)	10 (17)	9 (16)	8 (15)
AIR END DATA				
Male Rotor Speed	RPM	1469	1416	1269
Tip Speed Rotor	m/sec	25.54	24.62	22.06
Full Load Shaft Power	kW	248.2	252.1	243.0
COOLANT LUBRICATION DATA				
Total Coolant Capacity - Air Cooled	⁽¹²⁾ litres (US gal)	95 (25.1)	95 (25.1)	95 (25.1)
PIPING CONNECTIONS				
Air Discharge	⁽⁸⁾ Inches FLANGE	4.00 (8xM16; 7.5 IN B.C)	4.00 (8xM16; 7.5 IN B.C)	4.00 (8xM16; 7.5 IN B.C)
Package Automatic Condensate Drain	Inches NPT	.38 (FEMALE)	.38 (FEMALE)	.38 (FEMALE)
Coolant Drain - Hose Size	Inches	0.875	0.875	0.875
Diameter of Power Inlet	mm (Inches)	110 (4.3)	110 (4.3)	110 (4.3)
DIMENSIONS AND WEIGHT				
Length, Width, Height	mm (inches)	3752, 2150, 2504 (147.7, 84.6, 98.6)	3752, 2150, 2504 (147.7, 84.6, 98.6)	3752, 2150, 2504 (147.7, 84.6, 98.6)
Net Weight - Air Cooled	kg (lb.)	6380 (14065)	6380 (14065)	6380 (14065)
GA Drawing Number - Air Cooled		47589258	47589258	47589258
ELECTRICAL DATA				
Motor Protection	⁽¹³⁾	TEFC, IP55	TEFC, IP55	TEFC, IP55
Full Load Package Current - Air Cooled	⁽⁹⁾			
	Amps @ 380V	521	529	510
	Amps @ 460V	430	437	422
	Amps @ 575V	344	350	338
Main Motor Locked Rotor Current	⁽¹⁴⁾			
	Amps @ 380V	4050	4050	4050
	Amps @ 460V	3345	3345	3345
	Amps @ 575V	2638	2638	2638
Package Power Factor		0.86	0.86	0.86
Electrical Installation				
Recommended Supply Cable Size	⁽¹⁰⁾			
	mm ² /Cu (Kcmil) @ 380V	800 (1500)	800 (1500)	800 (1500)
	mm ² /Cu (Kcmil) @ 460V	500 (900)	500 (900)	500 (900)
	mm ² /Cu (Kcmil) @ 575V	400 (600)	400 (600)	400 (600)
Maximum Recommended Fuse Rating	⁽¹⁰⁾⁽¹¹⁾			
	Amps @ 380V	800	800	800
	Amps @ 460V	700	700	700
	Amps @ 575V	600	600	600



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MEDIUM VOLTAGE MODEL - ELECTRICAL DATA				
Motor Protection		IP55	IP55	IP55
Main Motor Current - Air Cooled				
	Amps @ 2300V	86	86	86
	Amps @ 4160V	50	50	50
Main Motor Locked Rotor Current				
	Amps @ 2300V	518	518	518
	Amps @ 4160V	275	275	275
Blower Motor Current - Air Cooled				
	Amps @ 380V	19	19	19
	Amps @ 460V	16	16	16
	Amps @ 575V	13	13	13
DIMENSIONS AND WEIGHT				
Length, Width, Height	mm (inches)	4577, 2150, 2504 (180.2, 84.6, 98.6)	4577, 2150, 2504 (180.2, 84.6, 98.6)	4577, 2150, 2504 (180.2, 84.6, 98.6)
Net Weight - Air Cooled	kg (lb.)	8314 (18329)	8314 (18329)	8314 (18329)
GA Drawing Number - Air Cooled		47589260	47589260	47589260

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)
- BSPT 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

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