



ENGINEERING DATA SHEET

RS250 60Hz

CCN: 47590690001
 Rev.: D
 ECN: 1299681
 Sheet: 1 of 2
 Date: May-2018

Model RS250ne-W145

GENERAL PERFORMANCE DATA

Maximum Target Operating Pressure	(2) barg (psig)		10.0 (145)							
Rated Discharge Pressure	barg (psig)		10.0 (145)							
Minimum Operating Pressure	barg (psig)		4.5 (65)							
Capacity FAD	(1)		<i>Max RPM</i>	Max	A	B	C	D	Min	<i>Min RPM</i>
@ 10 barg (145 psig)	m ³ /min (CFM)	1447	46.3 (1635)	43.2 (1526)	37.2 (1314)	31.2 (1102)	25.2 (888)	18.7 (660)	608	
@ 9.3 barg (135 psig)	m ³ /min (CFM)	1493	48.2 (1702)	44.8 (1582)	38.2 (1349)	31.7 (1119)	25.2 (890)	18.8 (662)	608	
@ 8.6 barg (125 psig)	m ³ /min (CFM)	1542	49.6 (1752)	46.7 (1649)	39.8 (1406)	32.8 (1158)	25.7 (908)	18.8 (664)	608	
@ 7.9 barg (115 psig)	m ³ /min (CFM)	1594	50.9 (1798)	47.3 (1670)	40.2 (1420)	33.0 (1165)	25.9 (915)	18.8 (664)	608	
@ 7.6 barg (110 psig)	m ³ /min (CFM)	1620	52.2 (1843)	48.8 (1723)	41.5 (1466)	34.0 (1201)	26.2 (925)	18.8 (664)	608	
@ 6.9 barg (100 psig)	m ³ /min (CFM)	1676	53.5 (1890)	50.0 (1766)	42.4 (1497)	34.5 (1218)	26.6 (939)	18.8 (664)	608	
Maximum Operating Ambient Temperature	°C (°F)									
Minimum Operating Ambient Temperature	°C (°F)									
Maximum System Temperature Setting	°C (°F)									
Nominal Power - Main Motor	kW (HP)									
Main Motor Efficiency	(3) %									
Main Inverter Drive Efficiency	%									
Package Input Power with Fan - Water Cooled	(4)		<i>Max RPM</i>	Max	A	B	C	D	Min	<i>Min RPM</i>
@ 10 barg (145 psig)	kW (HP)	1447	304.1 (408)	285.8 (383)	245.2 (329)	205.1 (275)	167.5 (225)	130.1 (174)	608	
@ 9.3 barg (135 psig)	kW (HP)	1493	303.0 (406)	283.7 (380)	242.0 (324)	201.8 (271)	163.6 (219)	127.3 (171)	608	
@ 8.6 barg (125 psig)	kW (HP)	1542	304.1 (408)	283.7 (380)	242.0 (324)	200.7 (269)	160.3 (215)	122.7 (164)	608	
@ 7.9 barg (115 psig)	kW (HP)	1594	301.1 (404)	276.2 (370)	235.5 (316)	192.9 (259)	154.7 (207)	116.9 (157)	608	
@ 7.6 barg (110 psig)	kW (HP)	1620	301.9 (405)	278.3 (373)	235.0 (315)	192.9 (259)	151.3 (203)	113.4 (152)	608	
@ 6.9 barg (100 psig)	kW (HP)	1676	303.0 (406)	278.3 (373)	233.3 (313)	189.1 (254)	149.1 (200)	108.8 (146)	608	
Specific Power - Water Cooled	(4)(5)		<i>Max RPM</i>	Max	A	B	C	D	Min	<i>Min RPM</i>
@ 10 barg (145 psig)	kW/m ³ /min (kW/100CFM)	1447	6.6 (18.6)	6.6 (18.7)	6.6 (18.7)	6.6 (18.6)	6.7 (18.9)	7.0 (19.7)	608	
@ 9.3 barg (135 psig)	kW/m ³ /min (kW/100CFM)	1493	6.3 (17.8)	6.3 (17.9)	6.3 (17.9)	6.4 (18.0)	6.5 (18.4)	6.8 (19.2)	608	
@ 8.6 barg (125 psig)	kW/m ³ /min (kW/100CFM)	1542	6.1 (17.4)	6.1 (17.2)	6.1 (17.2)	6.1 (17.3)	6.2 (17.7)	6.5 (18.5)	608	
@ 7.9 barg (115 psig)	kW/m ³ /min (kW/100CFM)	1594	5.9 (16.8)	5.8 (16.5)	5.9 (16.6)	5.8 (16.6)	6.0 (16.9)	6.2 (17.6)	608	
@ 7.6 barg (110 psig)	kW/m ³ /min (kW/100CFM)	1620	5.8 (16.4)	5.7 (16.1)	5.7 (16.0)	5.7 (16.1)	5.8 (16.4)	6.0 (17.1)	608	
@ 6.9 barg (100 psig)	kW/m ³ /min (kW/100CFM)	1676	5.7 (16.0)	5.6 (15.8)	5.5 (15.6)	5.5 (15.5)	5.6 (15.9)	5.8 (16.4)	608	

SOUND LEVEL

Noise Level Standard Package - Air Cooled	(6) Sound Pressure - dB(A)	75
Noise Level Standard Package - Air Cooled	Sound Power - dB(A)	95

COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)

Heat Removal (Oil Cooler)		<i>Max RPM</i>	Max	A	B	C	D	Min	<i>Min RPM</i>
@ 10 barg (145 psig)	kW (1000 Btu/hr)	1447	247.6 (845)	232.9 (795)	198.3 (677)	160.8 (549)	129.8 (443)	97.5 (333)	608
Heat Removal (Oil and Aftercooler)		<i>Max RPM</i>	Max	A	B	C	D	Min	<i>Min RPM</i>
@ 10 barg (145 psig)	kW (1000 Btu/hr)	1447	319.0 (1088)	299.5 (1022)	255.7 (873)	208.9 (713)	168.6 (575)	126.4 (431)	608
Permitted Additional Static Pressure	Pa (in H ₂ O)				0 (0.0)				
Fan / Blower Airflow	m ³ /min (CFM)				142 (4997)				
Fan / Blower Motor Nominal Power	kW				1.1				
Cooling Air Temperature Rise @ 30°C	°C (°F)				10 (18)				
Cooling Water Temperature Rise @ 30°C	°C (°F)				20 (36)				
Cooling Water Flow	(14)								
@ 10 °C (50 °F)	l/min (US gal/min)				136 (36)				
@ 20 °C (68 °F)	l/min (US gal/min)				181 (48)				
@ 30 °C (86 °F)	l/min (US gal/min)				268 (71)				
@ 40 °C (104 °F)	l/min (US gal/min)				303 (80)				
@ 46 °C (115 °F)	l/min (US gal/min)				338 (89)				
Cooling Water Max Pressure	bar (psi)				9 (135)				
Cooling Water Min Pressure	bar (psi)				1 (15)				
Cooling Water Pressure Drop	bar (psi)				0 (5)				
Aftercooler CTD	(7) °C (°F)				8.33 (15)				

AIR END DATA

STG1 Male Rotor Speed	RPM	1299
STG1 Rotor Tip Speed	m/sec	23.74
STG2 Male Rotor Speed	RPM	1205
STG2 Rotor Tip Speed	m/sec	16.22
Full Load Shaft Power	kW	282.0



ENGINEERING DATA SHEET

RS250
60Hz

CCN: 47590690001
Rev.: D
ECN: 1299681
Sheet: 2 of 2
Date: May-2018

Model	RS250ne-W145	
COOLANT LUBRICATION DATA		
Total Coolant Capacity - Water Cooled	litres (US gal)	129.0 (34.1)
PIPING CONNECTIONS		
Air Discharge	Inches Flange	4.00 (8xM16; 7.5 IN B.C)
Package Automatic Condensate Drain	Inches NPT	.38 (FEMALE)
Coolant Drain - Hose Size	Inches	0.875
Diameter of Power Inlet	mm / (inches)	110 (4.3)
Water Inlet and Outlet Connections	Inches NPT	2.00 (FEMALE)
DIMENSIONS AND WEIGHT		
Length, Width, Height	mm (inches)	4320, 2150, 2504 (170.1, 84.6, 98.6)
Net Weight - Water Cooled	kg (lb.)	8241 (18168)
GA Drawing Number - Water Cooled		47589259
ELECTRICAL DATA ⁽¹³⁾		
Motor Protection		TEFC, IP55
Motor, Number of Poles		4
Motor Insulation Class / Temperature Rise		Class F, 155 °C
Full Load Package Current - Water Cooled	⁽⁹⁾	
	Amps @ 380V	553
	Amps @ 460V	457
	Amps @ 575V	366
Package Power Factor		0.92
Electrical Installation		
Recommended Supply Cable Size	⁽¹⁰⁾	
	mm ² /Cu (Kcmil) @ 380V	2x400 (2x700)
	mm ² /Cu (Kcmil) @ 460V	800 (1250)
	mm ² /Cu (Kcmil) @ 575V	400 (750)
Maximum Recommended Fuse Rating	⁽¹⁰⁾⁽¹¹⁾	
	Amps @ 380V	1000
	Amps @ 460V	1000
	Amps @ 575V	700

Notes :

- FAD (Free Air Delivery) is full package performance including all losses. Tested per ISO 1217 : 2009 Annex E
- Maximum pressure at package discharge, value at which compressor will stop when unit operating at maximum target pressure
- Equivalent to IE3 efficiency motor
- Measured at rated capacity and rated pressure
- Specific power guaranteed in accordance with ISO 1217 : 2009 Annex E
- 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
- Fast acting Class-J, T or semiconductor type, current limiting, and Interrupt rating-200,000 Amps RMS. 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%

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