

Model Name		R55N-X100	R55N-X110	R55N-X115	R55N-X125	R55N-X135	R55N-X145
<b>GENERAL PERFORMANCE DATA</b>							
Rated Discharge Pressure	barg (psig)	7 (100)	7.5 (110)	8 (115)	8.5 (125)	9.5 (135)	10 (145)
Minimum Operation Pressure	barg (psig)	4.5 (65)	4.5 (65)	4.5 (65)	4.5 (65)	4.5 (65)	4.5 (65)
Capacity FAD @ Max Speed (1)	m <sup>3</sup> /min (CFM)	10.53 (372)	10.11 (357)	9.88 (349)	9.29 (328)	8.83 (312)	8.49 (300)
Capacity FAD @ Min Speed (1)	m <sup>3</sup> /min (CFM)	3.23 (114)	3.23 (114)	3.23 (114)	3.23 (114)	3.23 (114)	3.23 (114)
Turndown Percentage	Percent	69%	68%	67%	65%	63%	62%
Maximum Target Operating Pressure (2)	barg (psig)			10 (145)			
Maximum Operating Ambient Temperature	°C (°F)			46 (115)			
Minimum Operating Ambient Temperature	°C (°F)			2 (35)			
Maximum System Temperature Setting	°C (°F)			109 (228)			
Nominal Power - Main Motor	kW (HP)			55.00 (75)			
Main Drive Efficiency (3)	Percent			97.00%			
Main Motor Efficiency (3)	Percent			95.20%			
Package Input Power w/Fan - Air Cooled (4)	kW	68.2	68.3	68.6	68.4	68.5	69.4
Package Input Power w/Fan - Water Cooled (4)	kW	66.9	67.0	67.3	67.1	67.2	68.1
Specific Power - Air Cooled (4)(5)	kW/m <sup>3</sup> /min (kW/100cfm)	6.47 (18.33)	6.76 (19.13)	6.94 (19.66)	7.36 (20.85)	7.75 (21.96)	8.17 (23.13)
Specific Power - Water Cooled (4)(5)	kW/m <sup>3</sup> /min (kW/100cfm)	6.35 (17.98)	6.63 (18.77)	6.81 (19.28)	7.22 (20.46)	7.61 (21.54)	8.02 (22.7)
<b>SOUND LEVEL (6)</b>							
Standard Package - Air Cooled	dB(A)			69			
Standard Package - Water Cooled	dB(A)			69			
<b>COOLING DATA (@ Maximum Ambient Temperature &amp; Maximum Discharge Pressure)</b>							
Heat Removal Oil Cooler	kW (1000 Btu/hr)	49 (166)	49 (167)	50 (171)	50 (172)	51 (175)	52 (177)
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	66 (223)	66 (223)	66 (226)	67 (228)	67 (229)	67 (230)
Additional Static Pressure (13)	Pa (in H <sub>2</sub> O)			60 (0.25) - 250 (1.0)			
<b>Air-cooled</b>							
Fan Air Flow	m <sup>3</sup> /min (cfm)		Nom: 105 (3720)		Max: 176 (6200)		
Fan Motor Nominal Power	kW			2.2			
Cooling Air Temperature Rise	°C (°F)	24 (43)	24 (43)	24 (43)	24 (44)	25 (44)	25 (45)
Aftercooler CTD, 60 Hz (7)	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)
<b>Water-cooled - Standard Duty</b>							
Fan Air Flow				76 (2700)			
Fan Motor Nominal Power	kW			0.4			
Aftercooler CTD (7)(8)	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)
<b>Cooling Water Flow</b>							
@ 10°C (50°F)	l/min (gal/min)	60 (16)	60 (16)	60 (16)	65 (17)	61 (16)	61 (16)
@ 20°C (68°F)	l/min (gal/min)	60 (16)	60 (16)	61 (16)	61 (16)	61 (16)	62 (16)
@ 30°C (86°F)	l/min (gal/min)	62 (16)	62 (16)	62 (16)	63 (17)	63 (17)	63 (17)
@ 40°C (104°F)	l/min (gal/min)	64 (17)	64 (17)	64 (17)	65 (17)	65 (17)	65 (17)
@ 46°C (115°F)	l/min (gal/min)	65 (17)	66 (17)	66 (17)	67 (18)	67 (18)	67 (18)
Cooling Water Temperature Rise @ 30°C	°C (°F)	11 (20)	11 (20)	11 (20)	11 (20)	11 (20)	11 (20)
Cooling Water Pressure Drop	bar (psi)			Less than .88 bar (13 psi)			
Cooling Air Temperature Rise @ 30°C	°C (°F)	4 (6)	4 (6)	4 (6)	4 (7)	4 (7)	4 (7)
<b>Water-cooled - Harsh Duty</b>							
Fan Air Flow	m <sup>3</sup> /min (cfm)			76 (2700)			
Fan Motor Nominal Power	kW			0.4			
Aftercooler CTD (8)	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)
<b>Cooling Water Flow</b>							
@ 10°C (50°F)	l/min (gal/min)	103 (27)	103 (27)	104 (27)	105 (28)	105 (28)	106 (28)
@ 20°C (68°F)	l/min (gal/min)	105 (28)	105 (28)	105 (28)	107 (28)	107 (28)	107 (28)
@ 30°C (86°F)	l/min (gal/min)	107 (28)	107 (28)	108 (28)	109 (29)	109 (29)	110 (29)
@ 40°C (104°F)	l/min (gal/min)	111 (29)	112 (30)	112 (30)	113 (30)	114 (30)	114 (30)
@ 46°C (115°F)	l/min (gal/min)	115 (30)	115 (30)	116 (31)	117 (31)	117 (31)	118 (31)
Cooling Water Temperature Rise @ 30°C	°C (°F)	10 (18)	10 (19)	10 (19)	10 (19)	10 (19)	10 (19)
Cooling Water Pressure Drop	bar (psi)			Less than .88 bar (13 psi)			
Cooling Air Temperature Rise	°C (°F)	4 (7)	4 (7)	4 (7)	4 (7)	4 (7)	4 (7)
<b>Air End Data</b>							
Male Rotor Speed	rpm	2627	2515	2462	2365	2280	2200
Tip Speed Rotor	m/sec	24.6	23.5	23.0	22.1	21.3	20.6
Full Load Shaft Power	kW	61.4	61.5	61.8	61.6	61.7	62.5



# ENGINEERING DATA SHEET

**R55n**  
60Hz

CCN: 23769730  
Rev.: G  
ECN: 83739  
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Date: 16-Jun-2015

## CONSTRUCTION, FOUNDATION, AND MOUNTING DATA

### PIPING CONNECTIONS

Air Discharge	Inches BSPT/NPT (9)	2.00
Package Automatic Condensate Drain	Inches BSPT/NPT (9)	0.38
Coolant Drain Plug	Inches BSPT/NPT (9)	0.75
Diameter of Power Inlet	mm / inch	Up to 4.0" (removable plate)
Water Inlet and Outlet Connections	Inches BSPT/NPT (9)	1.50

### COOLANT LUBRICATION DATA

Total Coolant Capacity - Air Cooled	litres (US gal)	49 (13)
Total Coolant Capacity - Water Cooled - Std	litres (US gal)	31 (8)
Total Coolant Capacity - Water Cooled - Harsh	litres (US gal)	TBD

### DIMENSIONS & WEIGHT

		Base Mounted
Length, Width, Height	mm (inches)	2432(95.8)/1265(49.8)/ 2032(80)
Net Weight - Air Cooled	kg (lb.)	1420(3131)
Net Weight - Water Cooled	kg (lb.)	1367(3014)
GA Drawing Number - Air Cooled		23701352
GA Drawing Number - Water Cooled		23701345

### ELECTRICAL DATA

		380V. 3Φ	460V. 3Φ	575V. 3Φ	440V. 3Φ
Motor Protection		IP23 (ODP)			
Full Load Package Current - Air Cooled (10)	Amps	131	109	88	113
Full Load Package Current - Water Cooled (10)	Amps	127	105	84	110
Package Power Factor		0.91	0.91	0.90	0.91

### Electrical Installation

		380V. 3Φ	460V. 3Φ	575V. 3Φ	440V. 3Φ
Recommended Supply Cable Size (11)	mm <sup>2</sup> /Cu (AWG or kcmil)	95(4/0)	95(4/0)	95(4/0)	95(4/0)
Maximum Recommended Fuse Rating (11)(12)	Amps	250	250	250	250

### 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 ) At maximum speed and flow for the given package discharge pressure
- ( 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, with + 3 dB(A) tolerance.
- ( 7 ) 40% Relative Humidity Inlet Air and maximum speed ( For alternate conditions contact IR )
- ( 8 ) Ambient temperature equivalent to cooling water inlet temperature
- ( 9 ) BSPT or NPT, depending on regional standard
- (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) Fast Acting Class-J, T or Semiconductor type fuse required. Apply local electrical codes for fuse sizing
- (13) See detailed scope document 23883374

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