



ENGINEERING DATA SHEET

R45n

60Hz

CCN: 24192569
 Rev.: B
 ECN: 82093
 Sheet: 1 of 1
 Date: 20-Aug-2013

Model Name		R45N-X100	R45N-X110	R45N-X115	R45N-X125	R45N-X135	R45N-X145	
GENERAL PERFORMANCE DATA								
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 ³ /min (CFM)	7.42 (262)	7.39 (261)	7.28 (257)	7.02 (248)	6.74 (238)	6.46 (228)	
Capacity FAD @ Min Speed (1)	m ³ /min (CFM)	1.64 (58)	1.67 (59)	1.67 (59)	1.70 (60)	1.76 (62)	1.78 (63)	
Turndown Percentage	Percent	78%	77%	77%	76%	74%	72%	
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)				45.00 (60)			
Main Drive Efficiency (3)	Percent				97.00%			
Main Motor Efficiency (3)	Percent				93.70%			
Package Input Power w/Fan - Air Cooled (4)	kW	55.1	56.6	56.6	56.7	56.0	55.2	
Specific Power - Air Cooled (4)(5)	kW/m ³ /min (kW/100cfm)	7.43 (21.0)	7.66 (21.7)	7.78 (22.0)	8.07 (22.9)	8.31 (23.5)	8.55 (24.2)	
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)	41 (140)	43 (146)	43 (147)	43 (148)	43 (147)	42 (144)	
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	54 (183)	55 (189)	55 (189)	56 (190)	55 (188)	55 (186)	
Additional Static Pressure (13)	Pa (in H ₂ O)				See document 23883374			
Fan Air Flow	m ³ /min (cfm)		Nom: 84 (2984)		Max: 108 (3825)			
Fan Motor Nominal Power	kW				1.5			
Cooling Air Temperature Rise	°C (°F)	29 (52)	28 (51)	28 (51)	28 (50)	28 (50)	28 (51)	
Aftercooler CTD, 60 Hz (7)	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)	8 (15)	
AIR END DATA								
Male Rotor Speed	rpm	5400	5377	5287	5106	4925	4744	
Tip Speed Rotor	m/sec	36.2	36.1	35.5	34.3	33.1	31.8	
Full Load Shaft Power	kW	48.9	50.3	50.3	50.4	49.7	49.0	
COOLANT LUBRICATION DATA								
Total Coolant Capacity - Air Cooled	litres (US gal)		26 (6.9)					
PIPING CONNECTIONS								
Air Discharge	Inches BSPT/NPT (9)				1.50			
Package Automatic Condensate Drain	Inches BSPT/NPT (9)				0.38			
Coolant Drain - Hose Size	Inches				0.88			
Diameter of Power Inlet	mm / inch				Up to 4.0" (removable plate)			
DIMENSIONS & WEIGHT								
					Base Mounted			
Length, Width, Height	mm (inches)				1947(77)/1114(44)/ 1607(63)			
Net Weight - Air Cooled	kg (lb.)				776(1711)			
GA Drawing Number - Air Cooled					24068652			
ELECTRICAL DATA								
Motor Protection				380V. 3Φ	460V. 3Φ	575V. 3Φ	440V. 3Φ	
Full Load Package Current - Air Cooled (10)	Amps			102.7	85.3	68.7	88.6	
Package Power Factor				0.92	0.91	0.91	0.92	
Electrical Installation								
Recommended Supply Cable Size (11)	mm ² /Cu (AWG or kcmil)			50(1/0)	35(1/0)	35(1/0)	35(1/0)	
Maximum Recommended Fuse Rating (11)(12)	Amps			150	150	150	150	

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)
- (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

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