



ENGINEERING DATA SHEET

R110i

60 Hz

CCN: 23555840
 Rev.: K
 ECN: 83745
 Sheet: 1 of 2
 Date: 19-Jun-2015

Model Name		R110I-X110	R110I-X125	R110I-X145	R110I-X200
GENERAL PERFORMANCE DATA					
Maximum Operating Pressure ⁽²⁾	barg (psig)	7.5 (110)	8.5 (125)	10 (145)	14 (200)
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)	21.27 (751)	19.54 (690)	17.70 (625)	13.73 (485)
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)	110 (150)			
Main Motor Efficiency ⁽³⁾	Percent	95.8%			
Package Input Power - Air Cooled ⁽⁴⁾	kW	129.9	128.9	131.3	132.1
Package Input Power - Water Cooled ⁽⁴⁾	kW	126.4	125.4	127.7	128.6
Specific Power - Air Cooled ⁽⁴⁾⁽⁵⁾	kW/m ³ /min (kW/100cfm)	6.11 (17.30)	6.60 (18.68)	7.42 (21.00)	9.62 (27.24)
Specific Power - Water Cooled ⁽⁴⁾⁽⁵⁾	kW/m ³ /min (kW/100cfm)	5.94 (16.83)	6.42 (18.17)	7.22 (20.44)	9.36 (26.51)
SOUND LEVEL ⁽⁶⁾					
Standard Package - Air Cooled	dB(A)	71			
Standard Package - Water Cooled	dB(A)	71			
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)					
Heat Removal Oil Cooler	kW (1000 Btu/hr)	98 (336)	99 (338)	103 (351)	107 (366)
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	131 (446)	130 (443)	132 (449)	131 (445)
Additional Static Pressure (16)	Pa (in H ₂ O)	60 (0.25) - 250 (1.0)			
Air-cooled					
Fan Air Flow	m ³ /min (cfm)	250 (8832)	Maximum: 315 (11118)		
Fan Motor Nominal Power	kW	4.0			
Cooling Air Temperature Rise	°C (°F)	33 (59)	33 (59)	32 (58)	32 (58)
Aftercooler CTD, 60 Hz ⁽⁷⁾	°C (°F)	4 (7)	4 (7)	4 (7)	4 (7)
Water-cooled - Standard Duty					
Fan Air Flow	m ³ /min (cfm)	115 (4,000)			
Fan Motor Nominal Power	kW	0.8			
Aftercooler CTD ⁽⁷⁾⁽⁸⁾	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)
Cooling Water Flow					
@ 10°C (50°F)	l/min (gal/min)	160 (42)	159 (42)	163 (43)	166 (44)
@ 20°C (68°F)	l/min (gal/min)	164 (43)	163 (43)	167 (44)	169 (45)
@ 30°C (86°F)	l/min (gal/min)	168 (44)	167 (44)	171 (45)	173 (46)
@ 40°C (104°F)	l/min (gal/min)	173 (46)	173 (46)	176 (47)	177 (47)
@ 46°C (115°F)	l/min (gal/min)	179 (47)	177 (47)	181 (48)	181 (48)
Cooling Water Temperature Rise @ 30°C	°C (°F)	11 (19)	11 (19)	11 (19)	10 (19)
Cooling Water Pressure Drop	bar (psi)	Less Than 0.88 bar (13 psi)			
Cooling Air Temperature Rise @ 30°C	°C (°F)	7 (12)	7 (12)	7 (13)	7 (13)
Water-cooled - Harsh Duty					
Fan Air Flow	m ³ /min (cfm)	115 (4,000)			
Fan Motor Nominal Power	kW	0.8			
Aftercooler CTD ⁽⁸⁾	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)
Cooling Water Flow					
@ 10°C (50°F)	l/min (gal/min)	123 (33)	123 (33)	123 (33)	123 (33)
@ 20°C (68°F)	l/min (gal/min)	134 (35)	134 (35)	134 (35)	134 (35)
@ 30°C (86°F)	l/min (gal/min)	133 (35)	133 (35)	133 (35)	133 (35)
@ 40°C (104°F)	l/min (gal/min)	142 (37)	142 (37)	142 (37)	142 (37)
@ 46°C (115°F)	l/min (gal/min)	174 (46)	174 (46)	174 (46)	174 (46)
Cooling Water Temperature Rise @ 30°C	°C (°F)	14 (24)	14 (24)	14 (24)	14 (24)
Cooling Water Pressure Drop	bar (psi)	Less Than 0.88 bar (13 psi)			
Cooling Air Temperature Rise	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)



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CONSTRUCTION, FOUNDATION, AND MOUNTING DATA

PIPING CONNECTIONS

Air Discharge	Inches BSPT/NPT ⁽⁹⁾	2.50
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 ⁽¹³⁾	litres (US gal)	83 (22)
Total Coolant Capacity - Water Cooled - Std ⁽¹³⁾	litres (US gal)	71 (19)
Total Coolant Capacity - Water Cooled - Harsh ⁽¹³⁾	litres (US gal)	TBD

DIMENSIONS & WEIGHT

		Base Mounted
Length, Width, Height	mm (inches)	2703 / 1466 / 2032 (106.4 / 57.7 / 80)
Net Weight - Air Cooled	kg (lb.)	2550 (5620)
Net Weight - Water Cooled	kg (lb.)	2330 (5140)
GA Drawing Number - Air Cooled Std.		23539836
GA Drawing Number - Water Cooled Std.		23539844

ELECTRICAL DATA ⁽¹⁴⁾

		380V, 3Φ	440V, 3Φ	460V, 3Φ	575V, 3Φ
Motor Enclosure Protection		IP55 (TEFC)			
Full Load Package Current - Air Cooled ⁽¹⁰⁾	Amps	234	202	193	154
Full Load Package Current - Water Cooled ⁽¹⁰⁾	Amps	226	194	185	146
Package Locked Rotor Current	Amps	1845	1594	1524	1220
Package Power Factor		0.88	0.88	0.88	0.88

Electrical Installation

Recommended Supply Cable Size ⁽¹¹⁾⁽¹⁵⁾	mm ² /Cu (AWG or kcmil)	185(300)	150(250)	150(250)	95(3/0)
Maximum Recommended Fuse Rating ⁽¹¹⁾⁽¹²⁾	Amps	350	300	300	225

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 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) 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: ± 6%
- (15) Cable size based on 90°C copper cables
- (16) See detailed scope document 23883374

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