

Model Name		R160IE-X110	R160IE-X125	R160IE-X145	R160IE-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)	29.17 (1030)	27.47 (970)	25.57 (903)	20.53 (725)
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	HP		200		
Main Motor Efficiency ⁽³⁾	Percent		96.2%		
Pkg. Input Power with Fan Motor - Air Cooled ⁽⁴⁾	kW	174.9	174.3	173.3	167.4
Pkg. Input Power with Fan Motor - Water Cooled ⁽⁴⁾	kW	166.7	166.1	165.1	159.2
Specific Power - Air Cooled ⁽⁴⁾⁽⁵⁾	kW/m ³ /min (kW/100cfm)	6.00 (16.98)	6.35 (17.97)	6.78 (19.19)	8.15 (23.09)
Specific Power - Water Cooled ⁽⁴⁾⁽⁵⁾	kW/m ³ /min (kW/100cfm)	5.72 (16.18)	6.05 (17.12)	6.46 (18.28)	7.75 (21.96)
SOUND LEVEL ⁽⁶⁾					
Standard Package - Air Cooled	dB(A)			75	
Standard Package - Water Cooled	dB(A)			72	
COOLING DATA (@ Maximum Ambient Temperature & Maximum Discharge Pressure)					
Heat Removal Oil Cooler	kW (1000 Btu/hr)	167 (570)	165 (563)	165 (562)	171 (583)
Heat Removal Oil and Aftercooler	kW (1000 Btu/hr)	208 (711)	206 (702)	205 (701)	206 (703)
Additional Static Pressure ⁽¹⁶⁾	Pa (in H ₂ O)		60 (0.25) - 250 (1.0)		
Air-cooled					
Fan Air Flow	m ³ /min (cfm)		363 (12829)		
Fan Motor Nominal Power	kW		5.5		
Cooling Air Temperature Rise	°C (°F)	30 (55)	32 (58)	33 (60)	33 (60)
Aftercooler CTD, 60 Hz ⁽⁷⁾	°C (°F)	8 (15)	8 (15)	8 (15)	8 (15)
Water-cooled - Standard Duty					
Fan Air Flow	m ³ /min (cfm)		115 (4000)		
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)	214 (57)	214 (57)	218 (58)	208 (55)
@ 20°C (68°F)	l/min (gal/min)	218 (58)	218 (58)	218 (58)	210 (56)
@ 30°C (86°F)	l/min (gal/min)	222 (59)	222 (59)	222 (59)	222 (59)
@ 40°C (104°F)	l/min (gal/min)	233 (62)	237 (63)	241 (64)	222 (59)
@ 46°C (115°F)	l/min (gal/min)	237 (63)	237 (63)	248 (66)	244 (65)
Cooling Water Temperature Rise @ 30°C	°C (°F)	11 (20)	11 (20)	11 (20)	11 (20)
Cooling Water Pressure Drop	bar (psi)		Less Than 0.88 bar (13 psi)		
Cooling Air Temperature Rise @ 30°C	°C (°F)	9 (16)	9 (16)	9 (16)	9 (16)
Water-cooled - Harsh Duty					
Fan Air Flow	m ³ /min (cfm)		115 (4000)		
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)	184 (49)	207 (55)	207 (55)	196 (52)
@ 20°C (68°F)	l/min (gal/min)	184 (49)	206 (55)	205 (55)	196 (52)
@ 30°C (86°F)	l/min (gal/min)	188 (50)	214 (57)	214 (57)	196 (52)
@ 40°C (104°F)	l/min (gal/min)	207 (55)	227 (61)	229 (61)	196 (52)
@ 46°C (115°F)	l/min (gal/min)	206 (55)	227 (60)	228 (61)	230 (61)
Cooling Water Temperature Rise @ 30°C	°C (°F)	14 (25)	14 (25)	13 (24)	13 (23)
Cooling Water Pressure Drop	bar (psi)		Less Than 0.88 bar (13 psi)		
Cooling Air Temperature Rise	°C (°F)	8 (15)	8 (15)	9 (16)	9 (16)
AIR END DATA					
Male Rotor Speed Stage 1	RPM	2762	2651	2445	2005
Male Rotor Tip Speed Stage 1	m/sec	32.7	31.4	28.9	23.7
Male Rotor Speed Stage 2	RPM	2631	2528	2336	1925
Male Rotor Tip Speed Stage 2	m/sec	25.1	24.1	22.3	18.3
Full Load Shaft Power	kW	160	160	159	153

CONSTRUCTION, FOUNDATION, AND MOUNTING DATA
PIPING CONNECTIONS

Air Discharge	Inches BSPT/NPT ⁽⁹⁾	3.00
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)	95 (25)
Total Coolant Capacity - Water Cooled - Std	litres (US gal)	90(24)
Total Coolant Capacity - Water Cooled - Harsh	litres (US gal)	95 (25)

DIMENSIONS & WEIGHT

		Base Mounted
Length, Width, Height	mm (inches)	2855 / 1836 / 2032 (112.4 / 72.3 / 80)
Net Weight - Air Cooled	kg (lb.)	3198 (7050)
Net Weight - Water Cooled	kg (lb.)	3175 (7000)
GA Drawing Number - Air Cooled		23570609
GA Drawing Number - Water Cooled		23570617

ELECTRICAL DATA ⁽¹⁴⁾

		380V, 3Φ	440V, 3Φ	460V, 3Φ	575V, 3Φ
Motor Enclosure Protection		IP55 (TEFC)			
Full Load Package Current - Air Cooled ⁽¹⁰⁾	Amps	344	287	275	220
Full Load Package Current - Water Cooled ⁽¹⁰⁾	Amps	336	279	267	212
Package Locked Rotor Current	Amps	2628	2287	2068	1754
Package Power Factor		0.88	0.88	0.88	0.88

Electrical Installation

		350(700)	250(500)	200(400)	150(300)
Recommended Supply Cable Size ⁽¹¹⁾⁽¹⁵⁾	mm ² /Cu (AWG or kcmil)				
Maximum Recommended Fuse Rating ⁽¹¹⁾⁽¹²⁾	Amps	450	400	350	300

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 Ingersoll Rand)
- (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: 357V - 440V
- (15) Cable size based on 90°C copper cables
- (16) See detailed scope document 23883374

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