Sr. No.	Description	UOM (Wherever	Data (Common For All Models)	KWE100.14	KWE115.14	KWE135.14	KWE155.14	KWE175.14	KWE190.14	KWE210.14	KWE225.14	KWE200.24	KWE230.24	KWE250.24	KWE270.24	KWE290.24	KWE310.24	(WE330.24	KWE350.24	KWE365.24	KWE380.24	KWE405.24 KV	VE420.24	KWE435.24	KWE450.24
A	General Points	Applicable)																							
1	Cooling Capacity	ton <sub>R</sub>	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Power Consumption	kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Specific Power Consumption  Co-Efficient of Performance (COP)	kW/ton <sub>R</sub>	Refer KCPL Chiller Selection System Software  Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	No. of Compressors	Nos.	Refer KCPL Chillier Selection System Software	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	No. of Individual Refrigerant Circuits	Nos.	$\overline{}$	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Refrigerant		D124-																						
	Name Quantity	- kg	R134a Refer KCPL Chiller Selection System Software	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-	-		
	Technical Specifications	-	Refer ESP-18-19-003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Sound Pressure Level																								
	Noise Level Measuring Standard	dB	Refer ESP-18-19-001 ANSI/AHRI Standard 575-2008		-	-		-	-		-			-				-		-		-	-	-	<del></del>
9	Insulation Details		7. Holy 7 H Mi Standard 375 2000																						
i	Material	-	Closed Cell Nitrile Foam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
i ii	Insulation Thickness on Various Parts Evaporator Shell	- mm	For Standard Temperature Range (LWT upto -10 0C) 32			-		-	-		-			-			-			-		-	-	-	<del></del>
	Evaporator Tubesheet	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Dished End	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator M.W.Box (If Applicable) Evaporator Support Plate	mm mm	19		-	-		-	-		-			-				-		-		-	-	-	<del></del>
	Compressor Motor Body	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Suction Line Assembly	mm	19		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<del>                                     </del>	Liquid Line Assembly Insulation Thickness on Various Parts	mm -	9 For Brine Temperature Range (LWT below -10 0C)	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-		-
	Evaporator Shell	mm	51 (32+19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Tubesheet	mm	32	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-
<del>                                     </del>	Evaporator Dished End Evaporator M.W.Box (If Applicable)	mm mm	32 32																						
	Evaporator Support Plate	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Compressor Motor Body	mm	28 (19+9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<del>                                     </del>	Suction Line Assembly Liquid Line Assembly	mm mm	28 (19÷9) 19									-						-	-				-	-	-
iv	Density	kg/m <sup>3</sup>	76.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Thermal Conductivity	W/m.K	0.035 (at 0 0C Mean Temperature)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Standard Adhesive	-	IS 14164 Blend of Synthetic Polymers and Synthetic Resin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Insulation Specifications	-	Refer ESP-18-19-004	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
10	Vibration																								
	Vibration Level Vibration control	mm/sec	Less than 1.5 mm/sec Rubber Pads (Standard) / Spring Isolators (At an Additional Cost)	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-	-		<del></del>
	Standard	-	IS 12075	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
	Painting Specification		T																						
	Paint Type Standard	-	RAL 7035 Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Overall Dimensions																								
	Approx. Length	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Approx. Width Approx. Height	mm mm	Refer KCPL Chiller Selection System Software Refer KCPL Chiller Selection System Software	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Space Clearances Required																								
	Plain End Side (For Tube Cleaning) All Other Sides	mm mm	→ →	2900 1000	2900 1000	2900 1000	2900 1000	2900 1000	2900 1000	3800 1000		3800 1000	3800 1500	3800 1500											
iii	Overhead	mm		1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500		1500	1500	1500
14	Weight		Participation Called Called Control Called																						
	Approx. Shipping Weight Approx. Operating Weight	kg kg	Refer KCPL Chiller Selection System Software Refer KCPL Chiller Selection System Software	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	Cable Sizes																			•					
	Aluminum Cable Copper Cable	-	Refer ESP-14-15-01 Refer ESP-14-15-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Compressor Details		Note: 25: 14-13-01						-																
	Make	-	Kirloskar Chillers Private Limited																						
3	Type / Description Model	-	Semi-Hermetic Twin Screw Compressor Refer KCPL Chiller Selection System Software		-							-						-	-						
4	Drive	-	Direct Driven by Rotor Shaft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Capacity Control Percentage	-	Stanlage	100-25%	100-25%	100-25%	100-25%	100-25%	100-25%	100-25%	100-25%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5%	100-12.5% 10	00-12.5%	100-12.5%	100-12.5%
7	Type of Capacity Control Capacity Control Mechanism	-	Stepless Slide Valve Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-
8	Volumetric Ratio	-	Fixed Ratio (2.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Design and Test Parameters  Design Pressure	bar	30																						
	Test Pressure (Pneumatic)		33	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-			-		-
iii	Design Temperature	°C	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Max. Allowable Discharge Temperature	°C	120	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	
10	Bearings		Roller Bearings - For Radial Load																				-		_
i	Types of Bearings		Angular Contact Roller Bearing - For Axial Load	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Material of Construction	-	Steel		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
	Life of Bearing Class of Bearing	Hours	50,000 Proprietary Data			-	-		-		-	-			-	-		-	-				-		
11	Lubrication																								
i	Туре	-	Lubrication by Differential Pressure Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lubricating Oil Grade of Lubricating Oil	-	Synthetic Oil Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Quantity Oil		Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-			-		
12	Compressor Components MOC			-																					
	Screw Casing	-	Alloy Steel Cast Iron	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-
	Shaft	-	Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
iv	Rotor	-	Aluminum Alloy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Physical Data of Compressor Screw Construction		Twin Screw																						
ــــــــــــــــــــــــــــــــــــــ	Serest Construction	-	TWIT Sciew																						

Sr. No.	Description .	UOM	Date (Common For All Market)	WWE400 44	IONESAS AA	10115425 44	IONEAEE AA	10115475 44	10115400 44	10115240 44	10ME22E 44	WW5200 24	10115220.24	10115250 24	WW.E270.24	WW5200 24	104/5240 24 10	WE220 24	WWE250 24	WWESCE SA	WW.E200.24	WWE40E 24 WWE420	1/14/5425 24	1045450 24
Sr. INO.	Description	(Wherever Applicable)	Data (Common For All Models)	KWE100.14	KWE115.14	KWE135.14	KWE155.14	KWE1/5.14	KWE190.14	KWE210.14	KWE225.14	KWE200.24	KWE230.24	KWE250.24	KWE270.24	KWE290.24	KWE310.24 KV	WE330.24	KWE350.24	KWE365.24	KWE380.24	KWE405.24 KWE420.	24 KWE435.24	1 KWE450.24
-	No. of Lobes Male Rotor	Nos.	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
	No. of Lobes Female Rotor  Male Rotor Diameter (mm)	Nos. mm	6 Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	+ -
	Female Rotor Diameter (mm)	mm	Proprietary Data		-		-	-	-	-	-		-	-	-	-	-	-		-	-		-	1
vi	Driving Rotor	-	Male Rotor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Oil Filter	·																						
	Micron Rating Material of Construction	Micron	Resin Impregnated Fibres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	+ :
	Quantity		1 No. per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	- 7
15																								
	At Suction At Discharge	-	No Isolation Shut-off Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	+ -
С "	Compressor Motor Details	-	Strut-off valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
1	Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
2		-	Semi-Hermetic Squirrel Cage Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
4	Type of Duty Motor Rating	- kW	Continuous Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	<del></del>
5	Motor Speed (Synchronous)		3000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
6	, ,	-	NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
8	GD <sup>2</sup> of Rotor Whether SPDP or TEFC?		Proprietary Data NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
	Power Supply Details (Standard)		NA, being semi-mement type								-				_						_			
i	Supply Voltage		400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Permissible Voltage Variation		±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
	Frequency Permissible Frequency Variation		±3%		-	-	-		-	-	-	-		-	-	-	-		-	-	-			
v	Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Performance Indicators		ALIA.																					
	Motor Efficiency Class Motor Power		NA Refer KCPL Chiller Selection System Software																- 1					
	Motor Efficiency	-	Consult with Engineering Department on Case to Case Basis	-	-	-	_	-	-	-	-	-	-	-	-	-	-	-		-	-			
	Power Factor	-	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
	Class of Insulation  Motor Cooling		Class F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	Motor Cooling Type		Refrigerant Cooled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
ii	Cooling Mechanism	-	Suction Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Temperature at full load	°C	10 to 15 (At Normal Condtions)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Current Details Rated Load Current	А	Refer KCPL Chiller Selection System Software				_	_				_						_	_					
	Full Load Current	A	Refer KCPL Chiller Selection System Software		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
iv	Inrush/Starting Current	А	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Locked Rotor Current	A	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	- 470	- 470	-	-	-	-	-	-	-		-	-
	Starting Torque  No Load Current	N.m A	<i>→</i>	172 45.7	172 45.7	260 72.3	260 72.3	260 72.3	260 72.3	260 72.3	260 72.3	172 + 172 45.7 + 45.7	172 + 172 45.7 + 45.7	260 + 172 72.3 + 45.7	260 + 260 72.3 + 72.3	260 + 260 72.3 + 72.3		260 + 260 2.3 + 72.3	72.3 + 72.3	260 + 260 72.3 + 72.3	260 + 260 72.3 + 72.3	260 + 260 260 + 26 72.3 + 72.3 72.3 + 72	0 260 + 260 3 72 3 + 72 3	260 + 260 3 72.3 + 72.3
	Acceleration Time to Reach Rated Speed		2 to 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Control Settings																							
	No. of Starts per Hour Time Between STOP to START	1105.	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	<del></del>
	Time Between START to START		900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
	Power Supply (Standard-Chiller Icomer)																							
	Supply Voltage Permissible Voltage Variation		415 ±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	+ -
3		Hz	50		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
	Permissible Frequency Variation		±3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
5	Phase	-	320 (Standard)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	+ -
6	Control Voltage	V	230 (Standard) 110 (Special-Optional)		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-	-
7	Supply Wire System		3 Phase - 4 Wire System (Standard)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
1			3 Phase - 3 Wire System (Special-Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
	Fault Level at Busbar Oil Separator Details	kA	As per KCPL Standard Practice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	Туре		Horizontal Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
2		-	Baffle - Demister Arrangement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
3 4	Method of Oil Separation  Material of Construction	-	Separation by "Filtering Effect" Obtained Through Demister	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Body and Other Parts	-	Mild Steel (Refer "MOC" Sheet)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Demister  Physical Details		SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-
	Physical Details  Shell Diameter	inch		22	22	22	22	26	26	26	26	22	22	22	22	22	22	26	26	26	26	26 26	26	26
	Approx. Length	mm	, , , , , , , , , , , , , , , , , , ,	1225	1225	1225	1225	1395	1395	1395	1395	2035	2035	2035	2035	2035	2035	2365	2365	2365	2365	2365 2365	2365	
	Seperation Efficiency	%	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Oil Heater Details  Make		Kirloskar Approved Vendor																					
	Quantity	Nos.	KITIOSKAT Approved Vendor	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2 2	2	2
iii	Power Supply	٧	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Rating		250 Not Applicable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
F G	Coll Cooler Evaporator Details		Not Applicable	-	-	-	-		-	-	-	-		-	-		-	-	-	-	-	-	-	
1	Model	-	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
	Design Code		As per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
3	Type Tube Side (Fluid)		Shell and Tube Flooded Design Chilled Water	-	-	-	-	-	-	-		-			-	-	-	-	-		-		-	
	Shell Side (Fluid)		Refrigerant	-	-	-	-		-	-	-	-		-	-	-	-	-	-	-	-			
6	Design Parameters																							
	Design Temperature (Refrigerant Side)	-	65 Defen FED 07 00 407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
	Max. Operating Pressure (Refrigerant Side)  Design Pressure (Refrigerant Side)	bar bar	Refer ESP-07-08-107 Refer ESP-07-08-107		-	-				-		-			-	-			-				+	
	Test pressure (Refrigerant Side)		Refer ESP-07-08-107 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
v	Testing method (Refrigerant Side)	-	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	
	No. of Passes (Refrigerant Side)	Nos.	Single Pass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	4
	Design Temperature (Water Side)	°C	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
	Max. Operating Pressure (Water Side)	bar	Refer ESP-07-08-107																					

		UOM																							
Sr. No	Description	(Wherever	Data (Common For All Models)	KWE100.14	KWE115.14	KWE135.14	KWE155.14	KWE175.14	KWE190.14	KWE210.14	KWE225.14	KWE200.24	KWE230.24	KWE250.24	KWE270.24	KWE290.24	KWE310.24	KWE330.24	KWE350.24	KWE365.24	KWE380.24	KWE405.24	KWE420.24	KWE435.24	KWE450.24
	ix Design Pressure (Water Side)	Applicable) bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	x Test pressure (Water Side) xi Testing method (Water Side)	bar -	Refer ESP-07-08-107 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xii No. of Passes (Water Side)	Nos.	Two Pass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xiii Water Velocity xiv Inlet Pressure (Water Side)	m/s bar	Less than 3 m/s Depends on Site Piping Layout (Maximum Allowable - 9.4 bar)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xv Evaporating Temperature		Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Physical Data of Evaporator			0			0		0	42	42	42	12	12	12	42	12	12	42	42	42	42	42	42	12
	i Overall Length of Evaporator ii Shell Diameter	ft inch	<b>→</b>	20	20	20	22	22	24	12 22	12 22	22	22	22	22	12 24	24	24	24	12 26	12 26	12 26	12 26	12 30	30
	iii Shell Thickness	mm		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	10	10
	iv Approx. Shell Length v Material of Construction of Shell	mm -	Mild Steel	2662	2662	2662	2662	2662	2650	3548	3548	3548	3548	3536	3536	3536	3536	3536	3536	3536	3536	3536	3536	3526 -	3526
	vi Material Standard of Shell	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vii Tube Type/ Nature of Tube Surface	-	Integral Helical Fins on the Outside Surface and Integral Helical Ridges on the Inside Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	viii Tube Length	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ix Tube Diameter x Tube Thickness		Refer "HX Details" Sheet Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xi Material of Construction of Tube xii Material Standard of Tube	-	Cu Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xiii Water Volume in Evaporator	Liter	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Water Box Details	_	Standard - Dish Ends (M.W.Box - Optional)																						
	ii Material	-	Mild Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iii Material Standard iv Nozzle size	- NB	Refer "MOC" Sheet Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	v End connection	IND -	Standard - Victaulic Conn. (Flanged Conn Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vi MOC of Water Side Gasket vii MOC of Refrigerant Side Gasket	-	NAM AF 120 NAM AF 159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Accessories Provided	· -												-						-	-	-		-	
	i Pressure Relief Valve ii Drain/Vent Valves	- Inch	Spring Loaded (For Safety Valve Set Pressure Refer ESP) Plugged Connection Provided (3/8" NPT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Н	Condenser Details	men	,																						
1 2	Model Design Code	-	Refer KCPL Chiller Selection System Software As per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Туре	-	Shell and Tube Flooded Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Tube Side (Fluid) Shell Side (Fluid)	-	Chilled Water Refrigerant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Design Parameters		reingerune																						
	i Design Temperature (Refrigerant Side) ii Max. Operating Pressure (Refrigerant Side)	<sup>0</sup> C bar	100 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iii Design Pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iv Test pressure (Refrigerant Side) v Testing method (Refrigerant Side)	bar -	Refer ESP-07-08-107 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vi No. of Passes (Refrigerant Side)	Nos.	Single Pass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vii Design Temperature (Water Side) viii Max. Operating Pressure (Water Side)	°C bar	100 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ix Design Pressure (Water Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	x Test pressure (Water Side) xi Testing method (Water Side)	bar	Refer ESP-07-08-107 Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xii No. of Passes (Water Side)	Nos.	Two Pass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xiii Water Velocity xiv Inlet Pressure	m/s bar	Less than 3 m/s Depends on Site Piping Layout (Maximum Allowable - 9.4 bar)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xv Condensing Temperature		Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Physical Data of Condenser  i Overall Length of Condenser	ft	·	q	q	q	q	q	q	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	ii Shell Diameter	inch	<b>→</b>	16	16	16	18	18	20	18	18	18	18	18	18	20	20	20	20	22	22	22	22	26	26
	iii Shell Thickness iv Shell Length	mm mm	<u>→</u>	8 2668	8 2668	8 2668	8 2668	8 2668	8 2662	8 3554	8 3554	8 3554	8 3554	8 3554	8 3554	8 3548	8 3548	8 3548	8 3548	8 3540	8 3540	8 3540	8 3540	8 3528	8 3528
	v Material of Construction of Shell	-	Mild Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vi Material Standard of Shell	-	Refer "MOC" Sheet Integral Helical Fins on the Outside Surface and Integral Helical Ridges on	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vii Tube Type/ Nature of Tube Surface	-	the Inside Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	viii Tube Length ix Tube Diameter		Refer "HX Details" Sheet Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	x Tube Thickness xi Material of Construction of Tube	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xii Material Standard of Tube	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xiii Water Volume in Condenser Water Box Details	Liter	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	і Туре	-	Standard - Dish Ends (M.W.Box - Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii Material iii Material Standard	-	Mild Steel Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iv Nozzle size	NB	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	v End connection vi MOC of Water Side Gasket	-	Standard - Victaulic Conn. (Flanged Conn Optional)  NAM AF 120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vii MOC of Refrigerant Side Gasket		NAM AF 159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	i Pressure Relief Valve		Spring Loaded (For Safety Valve Set Pressure Refer ESP)	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii Drain/Vent Valves Suction Line	Inch	Plugged Connection Provided (3/8" NPT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1			ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Isolation Valve Material of Construction	-	No Isolation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Material Standard	-	Carbon Steel Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J 5	Angle Valve Discharge Line	-	Provided on Suction Line For Oil Recovery Line	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	Design Code	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Isolation Valve Material of Construction	-	Shut-off Valve Carbon Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Material of Construction  Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sr. No.	Description	UOM (Wherever	Data (Common For All Models)	KWE100.14	KWE115.14	KWE135.14	KWE155.14	KWE175.14	KWE190.14	KWE210.14	KWE225.14	KWE200.24	KWE230.24	KWE250.24	KWE270.24	KWE290.24	KWE310.24	KWE330.24	KWE350.24	KWE365.24	KWE380.24	KWE405.24	KWE420.24	KWE435.24	KWE450.24
5	Skin Type Thermowell	Applicable)	Provided on Discharge Line For Discharge Temp. Sensor	_	-	-	-	_	-	-	-	-	-	-	-	-	-	_	-	-	-	-	-		_
K	Liquid Line																								
1	Design Code Expansion Valve	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	i Type	l -	Electronic Expansion Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	_	- 1	-	-		_
		-	Refer "Make List" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii Quantity v Sight Glass	Nos.	Inbuilt	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	v Moisture Indicator	-	NA NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
	Filter Drier	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Material of Construction  Material Standard	-	Copper Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
L			Refer MICC Street	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		
	Туре	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Quantity Operating Conditions	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	i Heat Duty	kW	Depends on Working Conditions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-	- 1	-
	Hot Water Inlet Temperaure	°C	Depends on Site Conditions (Max. Possible - 40)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii Hot Water Outlet Temperaure	°C	Max. Possible - 45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		-
	v Hot Water Flow Rate Material of Construction	L/s -	Depends on Working Conditions Brazzed PHE, Plate Material - SS				-	-			-	-	-	-			-		-		-				
5	Water Side End connection Details																								
	Water Inlet Connection	NB	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		
	Water Outlet Connection Pressure Drop	NB	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	i Water Side	bar	less than 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	ii Refrigerant Side Economizer	bar -	Proprietary Data  Not Applicable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Starter and Control Panel		Not Applicable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	Panel Enclosure	-	Starter and Control Panel Integrated in Single Fabricated Box	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Make	-	Kirloskar Approved Vendor Rittal Enclosure - Sheet Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Material of Enclosure	-	Fabricated Enclosure - CRCA Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-	- 1	-
			Rittal Enclosure - (For Single Circuit Chillers) Enclosure - 1.5 mm																						
4	Thickness of Enclosure	mm	Door - 2 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Fabricated Enclosure - (For Dual Circuit Chillers) Load Bearing Member - 2 mm																						
			Non-Load Bearing Member - 1.6 mm																						
	Ingress Protection (IP) Painting Specification	-	IP54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	i Paint Type	-	RAL 7035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Standard	-	Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
7 8	Mounting Arrangement Type of Starter	-	Mounted on Chiller Star-Delta Starter	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-		-	-		-
	Type of Isolation	-	Not Applicable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-	-	-
	Type of Protection	-	Fuses per Circuit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
11	Switchgear Make	-	Schneider	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Electrical and Control Cables	-	Power - PVC Insulated Single Core (Vtg. Grade 1.1 kV) Control- PVC Insulated Single Core, Multicore Cable (Vtg. Grade 1.1 kV) Signal- Shielded Cable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Optional Features	l .																							
	Phase Indicating Lamps	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii Hooter iii Energymeter		Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
0	Controller		Special-Optional	-	-		-		-	-	-	-	-	-			-	-	-	-	-	-	-	-	
1	Make	-	Refer "Make List" Sheet																						
	Transmitters Oil Level Switch	-	NA Yes, Provided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Oil Level Failure Trip	-	Yes, Provided Yes, Provided		-	-	-	-	-	-	-	-	-	-	-		-	-	-	-		-	-		
5	LP Switch and Gauge	-	No, Controller Program will Take Care of Low Pressure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HP Switch and Gauge Chilled Water Flow Failure	-	No, Controller Program will Take Care of High Pressure Yes				-	-			-	-	-	-			-		-	-	-				
8	Cooling Water Flow Failure	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Reverse Rotor Protection	-	No Management of the Control of the	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-		
	High/Low Voltage Trip Low Current Trip (Current Based-Analog)	-	Yes Yes	-			-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-
12	High Current Trip (Current Based-Analog)	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Phase Failure/Reverse Phasing Trip	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Earth Fault Trip Communication Through RS232/RS485	-	No RS485	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-		-	-		-
16	Display of Microprocessor	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Type of Display	-	PGD0 Screen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Remote Monitoring Facility Output to DCS	-	Yes Applicable (Only if RS485 is Available)	-	-		-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-