Sr. No.			Description	UOM (Wherever Applicable)	Data (Common For All Models)	KAA050.17	KAA075.17	KAA130.17	KAA170.17	KAA200.17	KAA225.17	KAA255.17	KAA140.27	KAA165.27	KAA230.27	KAA260.27	KAA300.27	KAA345.27	KAA370.27	KAA400.27	KAA455.27
A			General Points																		
	1		Cooling Capacity	ton_R	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Power Consumption	kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Specific Power Consumption	kW/ton_R	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Co-Efficient of Performance (COP)	kW/kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		No. of Compressors	Nos.	→	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	6		No. of Individual Refrigerant Circuits	Nos.	→	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	7		Refrigerant																		
		i	Name	-	R407C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Quantity	kg	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Technical Specifications	-	Refer ESP-18-19-005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Sound Pressure Level																		
		i	Noise Level	dB	Refer ESP-18-19-001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Measuring Standard	-	ANSI/AHRI Standard 575-2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Insulation Details																		
		i	Material	-	Closed Cell Nitrile Foam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Insulation Thickness on Various Parts	-	For Standard Temperature Range (LWT upto -10 0C)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Shell	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Tubesheet	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Pass Partition Assembly	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Head Cover	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Support Plate	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Compressor Motor Body	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Suction Line Assembly	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Liquid Line Assembly	mm	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Insulation Thickness on Various Parts	-	For Brine Temperature Range (LWT below -10 0C)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Shell	mm	51 (32+19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Tubesheet	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Pass Partition Assembly	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Head Cover	mm	51 (32+19)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Evaporator Support Plate	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Compressor Motor Body	mm	28 (19+9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Suction Line Assembly	mm	28 (19+9)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			Liquid Line Assembly	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Density	kg/m^3	76.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Thermal Conductivity	W/m.K	0.035 (at 0 0C Mean Temperature)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Standard	-	IS 14164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	Adhesive	-	Blend of Synthetic Polymers and Synthetic Resin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Insulation Specifications	-	Refer ESP-18-19-004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10		Vibration																		
		i	Vibration Level	mm/sec	Less than 1.5 mm/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Vibration control	-	Rubber Pads (Standard) / Spring Isolators (At an Additional Cost)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Standard	-	IS 12075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11		Painting Specification																		
		i	Paint Type	-	RAL 7035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Standard	-	Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12		Overall Dimensions																		
		i	Approx. Length	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Approx. Width	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Approx. Height	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13		Space Clearances Required																		
		i	Panel Side	mm	→	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
		ii	Opposite to Panel Side	mm	→	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
		iii	All Other Sides	mm	→	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
		iv	Overhead	mm	→	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000
	14		Weight																		
		i	Approx. Shipping Weight	kg	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Approx. Operating Weight	kg	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15		Cable Sizes																		
		i	Aluminum Cable	-	Refer ESP-14-15-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Copper Cable	-	Refer ESP-14-15-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B			Compressor Details																		
	1		Make	-	Kirloskar Chillers Private Limited																
	2		Type / Description	-	Semi-Hermetic Twin Screw Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Model	-	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Drive	-	Direct Driven by Rotor Shaft	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Capacity Control Percentage	%	→	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%
	6		Type of Capacity Control	-	Stepless	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Capacity Control Mechanism	-	Slide Valve Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Volumetric Ratio	-	Fixed Ratio (3.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Design and Test Parameters																		
		i	Design Pressure	bar	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Test Pressure (Pneumatic)	bar	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Design Temperature	^0C	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		iv	Max. Allowable Discharge Temperature	^{0}C	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10		Bearings																				
		i	Types of Bearings	-	Roller Bearings - For Radial Load	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Angular Contact Roller Bearing - For Axial Load	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Material of Construction	-	Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Life of Bearing	Hours	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Class of Bearing	-	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11		Lubrication																				
		i	Type	-	Lubrication by Differential Pressure Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Lubricating Oil	-	Synthetic Oil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Grade of Lubricating Oil	-	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Quantity	Liter	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12		Compressor Components MOC																				
		i	Screw	-	Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Casing	-	Cast Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Shaft	-	Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Rotor	-	Aluminum Alloy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13		Physical Data of Compressor																				
		i	Screw Construction	-	Twin Screw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	No. of Lobes Male Rotor	Nos.	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	No. of Lobes Female Rotor	Nos.	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Male Rotor Diameter (mm)	mm	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Female Rotor Diameter (mm)	mm	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Driving Rotor	-	Male Rotor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14		Oil Filter																				
		i	Micron Rating	Micron	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Material of Construction	-	Resin Impregnated Fibres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Quantity	Nos.	1 No. per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15		Copressor Isolation Type																				
		i	At Suction	-	Butterfly Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	At Discharge	-	Shut-off Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C			Compressor Motor Details																				
	1		Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Motor Type	-	Semi-Hermetic Squirrel Cage Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Type of Duty	-	Continuous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Motor Rating	kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Motor Speed (Synchronous)	RPM	3000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Ingress Protection (IP)	-	NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		GD^2 of Rotor	-	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Whether SPDP or TEFC?	-	NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Power Supply Details (Standard)																				
		i	Supply Voltage	V	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Permissible Voltage Variation	%	±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Frequency	Hz	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Permissible Frequency Variation	%	±3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10		Performance Indicators																				
		i	Motor Efficiency Class	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Motor Power	kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Motor Efficiency	-	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Power Factor	-	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Class of Insulation	-	Class F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11		Motor Cooling																				
		i	Motor Cooling Type	-	Refrigerant Cooled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Cooling Mechanism	-	Suction Gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Temperature at full load	^{0}C	10 to 15 (At Normal Condtions)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12		Current Details																				
		ii	Rated Load Current	A	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Full Load Current	A	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Inrush/Starting Current	A	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Locked Rotor Current	A	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Starting Torque	N.m	→	88	132	260	338	394	483	483	132 + 132	172 + 172	260 + 209	260 + 260	338 + 260	338 + 338	394 + 338	394 + 394	483 + 483	
		vii	No Load Current	A	→	31.1	47.4	72.3	101	108	127	127	47.4 + 47.4	45.7 + 45.7	72.3 + 57.2	72.3 + 72.3	101 + 72.3	101 + 101	108 + 101	108 + 108	127 + 127	
		viii	Acceleration Time to Reach Rated Speed	Sec	2 to 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13		Control Settings																				
		i	No. of Starts per Hour	Nos.	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Time Between STOP to START	Sec	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Time Between START to START	Sec	900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D			Power Supply (Standard-Chiller Icomer)																				
	1		Supply Voltage	V	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Permissible Voltage Variation	%	±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Frequency	Hz	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Permissible Frequency Variation	%	±3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Control Voltage	V	230 (Standard)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					110 (Special-Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Supply Wire System	-	3 Phase - 4 Wire System (Standard)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					3 Phase - 3 Wire System (Special-Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Fault Level at Busbar	kA	As per KCPL Standard Practice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

E			Oil Separator Details																			
	1		Type	-	Dome Type (Built in Compressor)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Internal Structure	-	Demister Arrangement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Method of Oil Separation	-	Differential Mass Between Oil and Gas, Impact with Surfaces, Filtering of Oil-Gas Mixture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Oil Heater Details																			
		i	Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Quantity	Nos.	→	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
		iii	Power Supply	V	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Rating	W	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
F			Oil Cooler	-	If Applicable	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1		Type	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Quantity	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Heat Duty	kW	Depends on Working Conditions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Method of Cooling	-	Refrigerant Cooled																	
	5		Material of Construction	-	Brazzed PHE, Plate Material - SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Pressure Drop																			
		i	Oil Side	bar	less than 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Refrigerant Side	bar	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G			Evaporator Details																			
	1		Model	-	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Design Code	-	As per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Type	-	Shell and Tube DX Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Tube Side (Fluid)	-	Refrigerant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Shell Side (Fluid)	-	Chilled Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Design Parameters																			
		i	Design Temperature (Refrigerant Side)	^{0}C	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Max. Operating Pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Design Pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Test pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Testing method (Refrigerant Side)	-	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	No. of Passes (Refrigerant Side)	Nos.	→	2	2	2	2	1	1	1	2	2	1	1	1	1	1	1	1	1
		vii	Design Temperature (Water Side)	^{0}C	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Max. Operating Pressure (Water Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ix	Design Pressure (Water Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		x	Test pressure (Water Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xi	Testing method (Water Side)	-	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xii	No. of Passes (Water Side)	Nos.	Single Pass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xiii	Water Velocity	m/s	Less than 3 m/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xiv	Inlet Pressure	bar	Depends on Site Piping Layout (Maximum Allowable - 9.4 bar)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xv	Evaporating Temperature	^{0}C	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Physical Data of Evaporator																			
		i	Overall Length of Evaporator	ft	→	6	6	9	9	12	12	12	9	9	12	12	12	12	12	12	12	12
		ii	Shell Diameter	inch	→	14	16	18	20	18	20	20	18	18	20	20	22	22	24	24	26	
		iii	Shell Thickness	mm	→	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
		iv	Approx. Shell Length	mm	→	1753	1753	2666	2660	3552	3546	3546	2666	2666	3546	3546	3546	3546	3534	3534	3534	
		v	Material of Construction of Shell	-	Mild Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		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	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		x	Tube Thickness	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xi	Material of Construction of Tube	-	Cu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xii	Material Standard of Tube	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xiii	Water Volume in Evaporator	Liter	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Water Box Details																			
		i	Type	-	Standard - On Shell Nozzle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Material	-	Mild Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Standard (Material)	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Nozzle size	NB	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	End connection	-	Standard - Victaulic Conn. (Flanged Conn. - Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	MOC of Water Side Gasket	-	NAM AF 120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	MOC of Refrigerant Side Gasket	-	NAM AF 159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Accessories Provided																			
		i	Pressure Relief Valve	-	Spring Loaded (For Safety Valve Set Pressure Refer ESP)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Drain/Vent Valves	Inch	Plugged Connection Provided (3/8" NPT)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H			Condenser Coil Details																			
	1		Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Type	-	Fin and Tube Design	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Coil Arrangement	-	V' Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Tube Side (Fluid)	-	Refrigerant	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Fin Side (Fluid)	-	Air	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Design Parameters																			
		i	Design Temperature (Refrigerant Side)	^{0}C	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Max. Operating Pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Design Pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Test pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

		v	Testing method (Refrigerant Side)	-	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Total Heat Rejection	ton_R	Formula - THR = Chiller Cooling Capacity + (3.51685/Input Power)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	Condensing Temperature	^0C	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Degree of Subcooling	^0C	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Physical Structure																				
		i	No. of Passes (Refrigerant Side)	Nos.	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	No. of Rows (Refrigerant Side)	Nos.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Coil Face Area	m^2	2.23875 per coil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Air Velocity	m/s	Average 3 m/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Air Flow Rate	m^3/s	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	No. of Coils	Nos.	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	Fin Density (No. of Fins/inch)	Fins/inch	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Tube Diameter	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ix	Tube Thickness	mm	Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		x	Material of Construction of Tubes	-	Cu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xi	Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xii	Material of Construction of Fins	-	Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xiii	Type of Coating	-	Standard - No Coating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Hydrophilic Coating - Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					Blygold Coating - Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xiv	Thickness of Layer (Coating)	mm	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		xv	Life of Fins with Coating	Years	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I			Condenser Fan Details																				
	1		Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Fan Speed	RPM	910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		No. of Blades	Nos.	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Static Pressure	Pa	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Noise Level	dB	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Motor Details																				
		i	Motor Type	-	3 Phase Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Starter Type	-	DOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Class of Insulation	-	Class F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Motor Rating	kW	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Motor Current	A	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Supply Voltage	V	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	Phase	-	3 Phase	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Frequency	Hz	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ix	Motor Protection Class	-	IP54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Material of Construction																				
		i	Fan Blades	-	Aluminum Alloy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Motor	-	Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Safety Guard	-	Steel Wire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J			Adiabatic Kit Details																				
	1		Adiabatic Pad Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Material of Construction																				
		i	Adiabatic Pad	-	Cellulose Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Frame of Adiabatic Pad	-	Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Storage Tank	-	SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Fogger Pump Details																				
		i	Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Motor Type	-	3 Phase Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Starter Type	-	DOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Water Flow Rate	LPM	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Motor Rating	kW	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	Motor Current	A	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vii	Supply Voltage	V	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		viii	Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ix	Frequency	Hz	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Filter Details	-	4-Stage Filter Unit with Filter Cartridge																		
K			Chiller Base Frame Details																				
	1		Material	-	→	GI	GI	GI	GI	GI	GI	MS	GI	GI	GI	MS	MS	MS	MS	MS	MS	MS	MS
	2		Method and details of construction OR Nature and joints used-folded/Welded /Bolted	-	Welded Bottom Frame and Remaining Components are Bolted with Bottom Frame	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Finish - Hot Dip Galvanised, Corrosion Resistant etc.	-	Spray Galvanising for MS Material NA for GI Material (Coat Base frame and Casing with a Corrosion-Resistant Coating Capable of withstanding a 1000 hour Salt-Spray Test According to ASTM B117)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L			Suction Line																				
	1		Design Code	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Isolation Valve	-	Butterfly Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Material of Construction	-	Carbon Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Angle Valve	-	Provided on Suction Line For Service Purpose	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M			Discharge Line																				
	1		Design Code	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Isolation Valve	-	Shut-off Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	3		Material of Construction	-	Carbon Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Skin Type Thermowell	-	Provided on Discharge Line For Discharge Temp. Sensor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N			Liquid Line																				
	1		Design Code	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Expansion Valve																				
		i	Type	-	Electronic Expansion Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Quantity	Nos.	→	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2
		iv	Sight Glass	-	Inbuilt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	Moisture Indicator	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Filter Drier	-	Provided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Material of Construction	-	Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O			Desuperheater																				
	1		Type	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Quantity	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Operating Conditions																				
		i	Heat Duty	kW	Depends on Working Conditions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Hot Water Inlet Temperaure	^{0}C	Depends on Site Conditions (Max. Possible - 55)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Hot Water Outlet Temperaure	^{0}C	Max. Possible - 60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Hot Water Flow Rate	L/s	Depends on Working Conditions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Material of Construction	-	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	NB	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Pressure Drop																				
		i	Water Side	bar	less than 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Refrigerant Side	bar	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P			Economizer																				
	1		Type	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Quantity	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Heat Duty	kW	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Material of Construction	-	Brazzed PHE, Plate Material - SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Q			Starter and Control Panel																				
	1		Panel Enclosure	-	Starter and Control Panel Integrated in Single Fabricated Box	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Make	-	Kirloskar Approved Vendor															-	-	-	-
	3		Material of Enclosure	-	Fabricated Enclosure - GI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Thickness of Enclosure	mm	Fabricated Enclosure Load Bearing Member - 2 mm Non-Load Bearing Member - 1.6 mm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		Ingress Protection (IP)	-	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		Painting Specification																				
		i	Paint Type	-	RAL 7035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Standard	-	Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Mounting Arrangement	-	Mounted on Chiller	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Type of Starter	-	Star-Delta Starter (Soft Starter / VFD - Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Type of Isolation	-	MCCB in case of Star-Delta Starter FSD in case of Soft Starter Consult with Engineering Department on Case to Case Basis in case of VFD Starter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10		Type of Protection	-	MCCB in case of Star-Delta Starter FSD in case of Soft Starter Consult with Engineering Department on Case to Case Basis in case of VFD Starter	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11		Switchgear Make	-	Siemens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	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																				
		i	Phase Indicating Lamps	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ii	Hooter	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iii	Energymeter	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		iv	Door Handle	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		v	LOTO Arrangement	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		vi	VFD for Condenser Fans	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
R			Controller																				
	1		Make	-	Refer "Make List" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		Transmitters	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3		Oil Level Switch	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4		Oil Level Failure Trip	-	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5		LP Switch and Gauge	-	No, Controller Program will Take Care of Low Pressure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6		HP Switch and Gauge	-	No, Controller Program will Take Care of High Pressure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7		Chilled Water Flow Failure	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8		Cooling Water Flow Failure	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9		Reverse Rotor Protection	-	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	10		High/Low Voltage Trip	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11		Low Current Trip (Current Based-Analog)	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	12		High Current Trip (Current Based-Analog)	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13		Phase Failure/Reverse Phasing Trip	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14		Earth Fault Trip	-	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	15		Communication Through RS232/RS485	-	RS485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	16		Display of Microprocessor	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	17		Type of Display	-	PGD0 Screen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	18		Remote Monitoring Facility	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	19		Output to DCS	-	Applicable (Only if RS485 is Available)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-