Sr. No.	Description	UOM (Wherever Applicable)	Data (Common For All Models)	KAS050.17	KAS070.17	KAS095.17	KAS120.17	KAS160.17	KAS190.17	KAS210.17	KAS240.17	KAS130.27	KAS150.27	KAS215.27	KAS245.27	KAS280.27	KAS320.27	KAS345.27	KAS375.27	KAS415.27
Α	General Points	пррисавіс																		
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	kW/ton <sub>R</sub>	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Co-Efficient of Performance (COP)	kW/kW	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 6	No. of Compressors  No. of Individual Refrigerant Circuits	Nos.	<del></del>	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2 2	2
7	Refrigerant	1403.	,		_	_														
i	Name	-	R407C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ii	Quantity	kg	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Technical Specifications Sound Pressure Level	-	Refer ESP-18-19-005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Insulation Thickness on Various Parts Evaporator Shell	- mm	For Standard Temperature Range (LWT upto -10 0C) 32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Tubesheet	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Pass Partition Assembly	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Head Cover	mm	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Evaporator Support Plate	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<del>                                     </del>	Compressor Motor Body Suction Line Assembly	mm 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 Evaporator Pass Partition Assembly	mm 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)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<del>                                      </del>	Liquid Line Assembly	mm	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IV V	Density Thermal Conductivity	kg/m³ W/m.K	76.6 0.035 (at 0 0C Mean Temperature)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vi	,	- vv/III.K	IS 14164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
vii	Adhesive	ı	Blend of Synthetic Polymers and Synthetic Resin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
viii	Insulation Specifications	-	Refer ESP-18-19-004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Vibration Vibration Level		Less than 1.5 mm/sec																	
<del>                                     </del>	Vibration control	mm/sec	Rubber Pads (Standard) / Spring Isolators (At an Additional Cost)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
iii	Standard	-	IS 12075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Painting Specification																			
i	Paint Type	-	RAL 7035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
12	Standard Overall Dimensions	-	Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12   i	Approx. Length	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
ii	Approx. Width	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Approx. Height	mm	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13	Space Clearances Required	ma m-		3500	3500	2500	3500	2500	3500	3500	3500	2500	2500	2500	2500	3500	3500	3500	3500	3500
l ji	Panel Side Opposite to Panel Side	mm mm	→ →	2500 2200																
iii	All Other Sides	mm	<del>-</del>	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
	Overhead	mm		15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000
14	Weight	1.=	Defeat VCDI Chilles Colonting Control Coffee																	
i	Approx. Shipping Weight Approx. Operating Weight	kg kg	Refer KCPL Chiller Selection System Software Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Cable Sizes	"6	and the second of the second o																	
i	Aluminum Cable	-	Refer ESP-14-15-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Copper Cable	-	Refer ESP-14-15-01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B 1	Compressor Details  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%	100-25%	100-12.5%	100-12.5%		100-12.5%	100-12.5%	1	100-12.5%		100-12.5%
7	Type of Capacity Control Capacity Control Mechanism	-	Stepless Slide Valve Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Volumetric Ratio	-	Fixed Ratio (3.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	Design and Test Parameters																			
i	Design Pressure	bar	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Test Pressure (Pneumatic)	bar	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
iii	Design Temperature	°C	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 iv	Max. Allowable Discharge Temperature  Bearings	°C	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
10	Dear 11193																			

Sr. N	lo.	Description	UOM (Wherever Applicable)	Data (Common For All Models)	KAS050.17	KAS070.17	KAS095.17	KAS120.17	KAS160.17	KAS190.17	KAS210.17	KAS240.17	KAS130.27	KAS150.27	KAS215.27	KAS245.27	KAS280.27	KAS320.27	KAS345.27	KAS375.27	KAS415.27
	i	Types of Bearings	-	Roller Bearings - For Radial Load Angular Contact Roller Bearing - For Axial Load	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii	Material of Construction	-	Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Life of Bearing	Hours	50,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11		Class of Bearing Lubrication	-	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	Type	-	Lubrication by Differential Pressure Mechanism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Lubricating Oil	-	Synthetic Oil	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
-		Grade of Lubricating Oil Quantity	- Liter	Proprietary Data Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12		Compressor Components MOC	Litter	neier Kerl Cillier Selection System Software				_		-								-	-	<del>-</del>	
	_	Screw	-	Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Casing Shaft	-	Cast Iron Alloy Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Rotor	-	Aluminum Alloy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	Physical Data of Compressor		-																	
		Screw Construction No. of Lobes Male Rotor	- N	Twin Screw	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		No. of Lobes Female Rotor	Nos.	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iv	Male Rotor Diameter (mm)	mm	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+		Female Rotor Diameter (mm)	mm	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14		Driving Rotor Oil Filter	-	Male Rotor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-
	i	Micron Rating	Micron	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+	_	Material of Construction	- N	Resin Impregnated Fibres	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	_	Quantity Copressor Isolation Type	Nos.	1 No. per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-
	i	At Suction	-	Butterfly Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		At Discharge	-	Shut-off Valve	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C 1	_	Compressor Motor Details  Make	_	Kirloskar Approved Vendor	_	_	_	_	-	-	_	_	-	-	_	_	_	-	_	_	_
2		Motor Type	-	Semi-Hermetic Squirrel Cage Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	_	Type of Duty	-	Continuous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	_	Motor Rating Motor Speed (Synchronous)	kW RPM	Refer KCPL Chiller Selection System Software 3000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	_	Ingress Protection (IP)	-	NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	_	GD <sup>2</sup> of Rotor	-	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9		Whether SPDP or TEFC? Power Supply Details (Standard)	-	NA, Being Semi-Hermetic Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Supply Voltage	V	400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Permissible Voltage Variation	%	±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Frequency Permissible Frequency Variation	Hz %	50 ±3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	٧	Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10		Performance Indicators		lata .								1									
	_	Motor Efficiency Class Motor Power	kW	NA Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iii	Motor Efficiency	-	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-		Power Factor Class of Insulation	-	Consult with Engineering Department on Case to Case Basis Class F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1:		Motor Cooling	-	(1033)				-		-		-		-		-		-	-	-	
		Motor Cooling Type	-	Refrigerant Cooled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+		Cooling Mechanism Temperature at full load	- °C	Suction Gas 10 to 15 (At Normal Condtions)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12		Current Details	L	10 to 15 (At Normal Conductors)						-						-	-	-	-	-	
	ii	Rated Load Current	Α	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
$\vdash$		Full Load Current Inrush/Starting Current	<u>А</u> А	Refer KCPL Chiller Selection System Software Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+		Locked Rotor Current	A	Refer KCPL Chiller Selection System Software  Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	vi	Starting Torque	N.m		88	132	209	260	338	394	483	483	132 + 132	172 + 172		260 + 260			394 + 338	394 + 394	483 + 483
H		No Load Current Acceleration Time to Reach Rated Speed	A Sec	2 to 3	31.1	47.4	57.2	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
13	_	Control Settings	JEL	2.000									-	-	-	-	-		-	-	
		No. of Starts per Hour	Nos.	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+		Time Between STOP to START Time Between START to START	Sec Sec	300 900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D		Power Supply (Standard-Chiller Icomer)		1																	
1		Supply Voltage	V	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		Permissible Voltage Variation Frequency	% Hz	±10%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4		Permissible Frequency Variation	%	±3%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5		Phase	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6		Control Voltage	V	230 (Standard) 110 (Special-Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
+	+	Supply Wire System		3 Phase - 4 Wire System (Standard)	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
	$\perp$			3 Phase - 3 Wire System (Special-Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8		Fault Level at Busbar	kA	As per KCPL Standard Practice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

1   Type	Sr. I		Description	UOM (Wherever Applicable)	Data (Common For All Models)	KAS050.17	KAS070.17	KAS095.17	KAS120.17	KAS160.17	KAS190.17	KAS210.17	KAS240.17	KAS130.27	KAS150.27	KAS215.27	KAS245.27	KAS280.27	KAS320.27	KAS345.27	KAS375.27	KAS415.27
T	E 1	_	Oil Separator Details		Dome Type (Ruilt in Compressor)	_		_	_	_	_	_	_	_	<u>_</u>	_	_	_	_	<u>-</u>	_	<u>_</u>
Total Control Contro		_	**			-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-
1   March Work	3		Method of Oil Separation	_		_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_
The content of the	H-		·		Oil-Gas Mixture																	
1   1   1   1   1   1   1   1   1   1	- 4			-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B. Stang				Nos.	→	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
A Control   Co	$\vdash$	_				-	-	-	-			+	-							-		-
1   1   1   1   1   1   1   1   1   1	F		Ü			-	-	-	-		-	+	-				-			-		-
1   1   1   1   1   1   1   1   1   1		_				-	-	-	-		-	+	-		-		-	-		-		-
Migrate Court   Migrate Cour	2	_		Nos.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manufact Content and St.   Forest Content and St.			•			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Part		_	·		-					_	_		_	_	_	_		_	_	_	_	_
Column   C					Diazzeu File, Flate Wateriai - 33									-				_	_		_	
3   Supplement Value   Supplem		_	Oil Side	bar	less than 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Company   Section   Sect			· ·	bar	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Comparison				_	Refer KCPI Chiller Selection System Software																	
Page   Properties   Propertie					·	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Section   Control   Cont			Туре			-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-
Residence   Company   Co			, ,		_	-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
Conference of the Proposed Conference Conf				-	Chilled Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
No.   No.   Security Processing Security (Associated Security Se	E		<u> </u>	<sup>0</sup> С	65	-	-	-	-	-	-	-	-	_	-	_	-	-	-	-	_	-
1   Dodge Personal Reference Risks   20   Mark 1987 09 327   1   1   1   1   1   1   1   1   1						-	-	-	-		-	-	-	-	-	-	-	-		-		-
Figure protects (Arright persons (Col)   10   10   10   10   10   10   10   1				bar		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mode						-	-	-	-		-		-				-	-		-		-
	$\vdash$				Refer LSP-0/-08-10/	2	2	2	2		1		1					- 1		1		1
A   No. Concent Prince (Water 1984)   Dec   Mark (Park 707-817)   Dec   Mark (Park 7					65	-	-	-	-		-	-	-	-	-	-	-	-	-	-	_	-
1   Tell processes (March Side)   March   March Side (March Side)   Marc		viii	Max. Operating Pressure (Water Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
a   Safe, method (Water Seld)						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
As   No. of Passes (Vertice's 1868)   No. of Passes (Vertice's 1869)   No. of Passes (Vertice's 1						-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
A sill Motor Verlocky						-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
Variable   Variable						-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
7						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1   Overal Lengthon of Evaposation   1   Overal Lengthon of Evaposation   1   Overal Lengthon of Evaposation   1   Overal Lengthon   1   Overal Lengthon of Evaposation   1   Overal Lengthon   1	<u> </u>			°C	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1   Stell Diameter   Inch	7			ft	<b></b>	6	6	Q	Q	<b>Q</b>	12	12	12	Q	Q	12	12	12	12	12	12	12
V Approx. Shell length					· · · · · · · · · · · · · · · · · · ·	14	ŭ	16							,							26
V   Microiral of Construction of Shell				mm		8	8	8														8
Vision   Micros   Standard of Shell   - Selfer *MOC* Sheet   - Selfer *MOC* Sheet   - Selfer *MOC * Sheet   - Selfer *MOC * Sheet   - Selfer * MOC * Sheet   - Selfer * M					> A 471 Co. 1	1753	1753	2666	2666	1	3552	1	3546		2666	3546		3546		3534	3534	3534
Will Tube Type / Nature of Tube Surface	$\vdash$					-	-	-	-		-		-		-	-		-		-		-
No   Tube   Ingrither of trube Surface																						
X   Tube Diameter	$\perp$		· ·	-	the Inside Surface	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X   Tube Thickness	$\vdash$					-	-	-	-		-	-	-	-	-	-	-	-		-	-	-
xi   Material Standard of Tube   -   Gefer MOC' Sheet   -   Gefer MOC' Sheet   -   -   -   -   -   -   -   -   -	+					-	-	-	-		-	+	-		-			-		-		-
Nation   Material Standard of Tube		xi	Material of Construction of Tube			-	-	-	-		-		-		-	-		-		-		-
8   Water Box Details		_				-	-	-	-		-	-	-	-	-	-	-	-	-	-		-
Type	+			Liter	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note	H			-	Standard - On Shell Nozzle	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V   Nozzle size		ii	Material		Mild Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
V   End connection						-	-	-	-		-	+	-		-	-	-	-		-		-
VI   MOC of Water Side Gasket   - NAM AF 120   - NAM AF 159   -	$\vdash$					-	-	-	-		-		-		-	-	-	-		-		-
Vii MOC of Refrigerant Side Gasket   NAM AF 159   NAM A	+					-	-	-	-		-	+	-					-		-		-
Pressure Relief Valve		vii	MOC of Refrigerant Side Gasket			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
Inch   Plugged Connection Provided (3/8" NPT)	9																					
H Condenser Coil Details    1		l i l				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1       Make       -       Kirloskar Approved Vendor       - <td< th=""><td>1 1</td><td></td><td></td><th>inch</th><th>riugged Connection Provided (3/8 NPT)</th><td>-</td><td>-</td><td>-</td><td></td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td></td<>	1 1			inch	riugged Connection Provided (3/8 NPT)	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-
2       Type       -       Fin and Tube Design       - <th>Н</th> <th>ii</th> <th></th> <th>_</th> <th></th> <th></th> <th></th> <th>_</th>	Н	ii																_				_
4       Tube Side (Fluid)       -       Refrigerant       -		ii	Condenser Coil Details  Make		Kirloskar Approved Vendor	-	-	-	-	-	-	<u> </u>	<u> </u>	-	-	-			-	-	-	
5       Fin Side (Fluid)       -       Air       -	1 2	ii	Condenser Coil Details Make Type	-	Fin and Tube Design	-	-	-	-	-	-	1	-	-	-	-	-	-		-		-
6 Design Parameters i Design Temperature (Refrigerant Side)	1 2 3	ii - - !	Condenser Coil Details  Make  Type  Coil Arrangement	- - -	Fin and Tube Design V' Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
i Design Temperature (Refrigerant Side) <sup>0</sup> C 100	1 2 3	ii	Condenser Coil Details  Make Type Coil Arrangement Tube Side (Fluid)	- - - -	Fin and Tube Design V' Type Refrigerant	-	-		-	- - -		-	-	-	-	-	-	-	-	-	-	- - -
ii Max. Operating Pressure (Refrigerant Side) bar Refer ESP-07-08-107	1 2 3 4 5	ii	Condenser Coil Details  Make Type Coil Arrangement Tube Side (Fluid) Fin Side (Fluid)	- - - -	Fin and Tube Design V' Type Refrigerant	-		-	-	- - -		-	-	-	-	-	-		-		-	-
	1 2 3 4 5	ii	Condenser Coil Details  Make Type Coil Arrangement Tube Side (Fluid) Fin Side (Fluid) Design Parameters Design Temperature (Refrigerant Side)	- - - -	Fin and Tube Design V' Type Refrigerant Air	-	-	-	-	- - -	-	-	-	-	-	-	-		-	-	-	-

Sr. N	No.	Description	UOM (Wherever	Data (Common For All Models)	KAS050.17	KAS070.17	KAS095.17	KAS120.17	KAS160.17	KAS190.17	KAS210.17	KAS240.17	KAS130.27	KAS150.27	KAS215.27	KAS245.27	KAS280.27	KAS320.27	KAS345.27	KAS375.27	KAS415.27
	Liii	Design Pressure (Refrigerant Side)	Applicable) bar	Refer ESP-07-08-107	-	_	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Test pressure (Refrigerant Side)	bar	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Testing method (Refrigerant Side)	-	Refer ESP-07-08-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Total Heat Rejection	ton <sub>R</sub>	Formula - THR = Chiller Cooling Capacity + (3.51685/Input Power)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Condensing Temperature	°C	Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Degree of Subcooling	°C	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6		Physical Structure No. of Passes (Refrigerant Side)	Nos.	I A					-		_		_	_	_	_		_		-	_
		No. of Rows (Refrigerant Side)	Nos.	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Coil Face Area	m <sup>2</sup>	2.23875 per coil	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Air Velocity	m/s	Average 3 m/s	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	v	Air Flow Rate	m³/s	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		No. of Coils	Nos.	Refer KCPL Chiller Selection System Software	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fin Density (No. of Fins/inch)	Fins/inch	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Tube Diameter Tube Thickness	mm	Refer "HX Details" Sheet Refer "HX Details" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Material of Construction of Tubes	-	Cu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Material Standard	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xii	Material of Construction of Fins	-	Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				Standard - No Coating	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	xiii	Type of Coating	-	Hydrophilic Coating - Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	viv	Thickness of Layer (Coating)	mm	Blygold Coating - Optional  Consult with Engineering Department on Case to Case Basis	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
	_	Life of Fins with Coating	Years	Consult with Engineering Department on Case to Case Basis  Consult with Engineering Department on Case to Case Basis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	_	Condenser Fan Details		0 - 0																	
1	_	Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	_	Fan Speed	RPM	910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-
3	_	No. of Blades	Nos.	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	_	Static Pressure	Pa	70 73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6		Noise Level Motor Details	dB	73	-	1	-	-	-	<del>                                     </del>	-	-	-	-	-	-	-	-	-	-	-
0	_	Motor Type	_	3 Phase Induction Motor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-
	_	Starter Type	-	DOL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	iii	Class of Insulation	-	Class F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Motor Rating	kW	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Motor Current	Α	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Supply Voltage Phase	V	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Frequency	Hz	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Motor Protection Class	-	IP54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7		Material of Construction			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	i	Fan Blades	-	Aluminum Alloy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	ii	Motor	-	Aluminum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J		Safety Guard Chiller Base Frame Details	-	Steel Wire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	_	Material		$\rightarrow$	GI	GI	GI	GI	GI	GI	GI	MS	GI	GI	GI	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)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K	+	Suction Line		, , , , , ,																	
K 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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
L 1		Discharge Line  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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M		Liquid Line		ACME D24.2																	
2		Design Code Expansion Valve	-	ASME B31.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<del>  '</del>		Type	-	Electronic Expansion Valve	-		-	-	-		-	-	_	-	-	-	-	-	-	-	_
		Make	-	Kirloskar Approved Vendor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	_	Quantity	Nos.	→	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	_	Sight Glass	-	Inbuilt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	- I	-	-
	_	Moisture Indicator	-	NA .	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	_	Filter Drier	-	Provided	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4		Material of Construction	-	Copper	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-

			UOM																	
Sr.		Description	(Wherever Applicable)	Data (Common For All Models)	KAS050.17	KAS070.17	KAS095.17	KAS120.17	KAS160.17	KAS190.17	KAS210.17	KAS240.17	KAS130.27	KAS150.27	KAS215.27	KAS245.27	KAS280.27	KAS320.27	KAS345.27 KAS37	5.27 KAS415.27
N S	_	Material Standard Desuperheater	-	Refer "MOC" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	-	Туре	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Quantity	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Operating Conditions	1147	lo I w I' o Ev						1						ı				
		Heat Duty Hot Water Inlet Temperaure	kW °C	Depends on Working Conditions  Depends on Site Conditions (Max. Possible - 60)	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Hot Water Outlet Temperaure	°C.	Max. Possible - 65	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Hot Water Flow Rate	L/s	Depends on Working Conditions	-	-		-	-	-	-	-	-	-	-	-	-	-		
4		Material of Construction	-	Brazzed PHE, Plate Material - SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	_	Water Side End connection Details							•	•									<u> </u>	•
		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 Water Side	bar	less than 0.5				_	_		_	_			_	_		_		
	ii i	Refrigerant Side	bar	Proprietary Data	_	-			-	-	-	-	-	-	-	-	-	-		-
0		Economizer																		
:		Туре	-	Plate Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Quantity	Nos.	One per Compressor	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	-	Heat Duty	kW	Proprietary Data	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
P	_	Material of Construction Starter and Control Panel	-	Brazzed PHE, Plate Material - SS	-	-	-	-	-	-	-	-	-	-	<del>-</del>	-	-	-	-	-
1	-	Panel Enclosure	-	Starter and Control Panel Integrated in Single Fabricated Box	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	2	Make	-	Kirloskar Approved Vendor													-	-		-
3	3	Material of Enclosure	-	Fabricated Enclosure - GI	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	.	This large of Facility		Fabricated Enclosure																
4	1	Thickness of Enclosure	mm	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	_	Painting Specification		consult with Engineering Department on case to case basis																
	i	Paint Type	-	RAL 7035	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	ii	Standard	-	Coating as per KCPL Standards	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1 2	-	Mounting Arrangement	-	Mounted on Chiller Star-Delta Starter (Soft Starter / VFD - Optional)	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	<b>`</b>	Type of Starter	-	MCCB in case of Star-Delta Starter	-	-		-	-	-	-	-	-	-	-	-	-	-		-
				FSD in case of Soft Starter																
9	,	Type of Isolation	-	Consult with Engineering Department on Case to Case Basis in case of VFD	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
				Starter																
				MCCB in case of Star-Delta Starter																
1	0	Type of Protection	-	FSD in case of Soft Starter  Consult with Engineering Department on Case to Case Basis in case of VFD	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
				Starter																
1	1	Switchgear Make		Siemens	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
				Power - PVC Insulated Single Core (Vtg. Grade 1.1 kV)																
1	2	Electrical and Control Cables	-	Control- PVC Insulated Single Core, Multicore Cable (Vtg. Grade 1.1 kV)	_	_	-	-	-	-	-	-	-	-	-	-	-	-		_
				Signal- Shielded Cable																
1	3	Optional Features																		
	_	Phase Indicating Lamps	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
	ii	Hooter	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Energymeter	-	Special-Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-		Door Handle LOTO Arrangement	-	Special Optional	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-		VFD for Condenser Fans	-	Special-Optional Special-Optional	-				-			-	-	-	-	-		-		
Q		Controller		opusius							-								•	
		Make	-	Refer "Make List" Sheet	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
		Transmitters	-	NA	-	-	-	-	-		-	-	-	-	-	-		-		
		Oil Level Switch	-	NA NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4		Oil Level Failure Trip LP Switch and Gauge	-	NA No, Controller Program will Take Care of Low Pressure	-	-	-		-		-	-	-	-	-	-		-		
		HP Switch and Gauge	-	No, Controller Program will Take Care of Low Pressure  No, Controller Program will Take Care of High Pressure	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Chilled Water Flow Failure	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
8		Cooling Water Flow Failure	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
9		Reverse Rotor Protection	-	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		High/Low Voltage Trip Low Current Trip (Current Based-Analog)	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		High Current Trip (Current Based-Analog)	-	Yes Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		Phase Failure/Reverse Phasing Trip	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	4	Earth Fault Trip	-	No	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1	5	Communication Through RS232/RS485	-	RS485	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
1		Display of Microprocessor	-	Yes	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		Type of Display	-	PGD0 Screen	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1		Remote Monitoring Facility Output to DCS	-	Yes Applicable (Only if RS485 is Available)	-		-		-		-	-	-	-	-	-	-	-		
	~ <u> </u>	output to boo		Applicable (Only II NOTOS IS Available)																