

LOG SHEET FOR YVWE CHILLERS



Customer Name	Indian Immunological Ltd.	Date	26/Oct/2021
Customer location	Gachibowli Hyd.	Initial kWh	
Chiller model	YVWE200CA55A	Final kWh	-
Chiller start time	S.M. - 50612C10649276	kWh for the day	-
Chiller stop time	-	Chiller location	TERACE.

Item	Parameter Description	Chiller Serial No.	Time			
			2:30	3:00	4:00	4:30
Evaporator	Refrigerant	Evaporator Pressure	275	219	223	228
		Evaporator Saturation Temperature	8.8	5.5	3.9	3.7
		Small Temperature Difference	2.9	0.5	0.9	1
	Liquid	Leaving Chilled Liquid Active Setpoint	7.5	7.5	7.5	7.5
		Leaving Chilled Liquid Temperature	11.7	6	4.8	4.7
		Return Chilled Liquid Temperature	16.2	9.9	8	6.9
		Inlet Pressure	1.8	1.8	1.8	1.8
		Outlet pressure	0.1	0.1	0.1	0.1
		Flow rate	N/A	N/A	N/A	N/A
		Condenser Pressure	782	731	663	617
Condenser	Refrigerant	Condenser Saturation Temperature	34.9	32.9	30.1	27.7
		Small Temperature Difference	2	0.6	0.7	1.1
		Refrigerant level setting	42% / 100% / 42-70%		39/50	41/50
		Refrigerant Level Position in sight glass	1/2	1/2	1/2	2/3
		Refrigerant Level Position Display	42%	42-70%	39%	41%
	Liquid	Leaving Condenser Liquid Temperature	32.9	32.3	30.8	28.8
		Return Condenser Liquid Temperature	25	26	26	25.9
		Inlet Pressure	2.2	2.4	2.4	2.1
		Outlet pressure	1.8	1.8	1.9	1.7
		Flow rate	N/A	N/A	N/A	N/A
Compressor	Motor Temperature- A/B/C	35/28/30	34/27/39	35/22/29	31/26/22	
	Discharge Temperature	43.8	43.4	39.6	38.1	
	Discharge super heat	8.9	10.6	9.9	10.5	
	Oil Pressure	756	705	638	617	
	Run Current	209	199.6	155.2	129.8	
	FLA	99%	99.07%	64	52	
	Run Time					
	Liquid Injection Oil cooling	On/OFF	OFF	OFF	OFF	
VSD	Frequency Command	Hz	50	36.5	22.5	22.5
	Frequency Running	Hz	50	36.5	22.5	22.5
	DC Link Voltage	V	540	540	552	558
	Output Voltage	V	380	351	189	189
	Output Current	A	209	199.6	155.2	129.8
	Output Power	kW	-	-	-	-
	Heatsink Temperature	°C/°F	53	52	51	51
KW Hours	kWh	-	-	-	-	
Operating Hours	Hrs	18	18	19	20	
Number of Starts	Nos	14	14	14	14	
Ambient Temperature. DBT/WBT	°C/°F	-	-	-	-	

Remarks: maintains water temperature

Supervisor's signature: [Signature]

Customer's signature: [Signature]

[Handwritten signature]

[Circular stamp]



COMMISSIONING CHECKLIST AND REPORT FOR WATER COOLED CETRIFUGAL & SCREW CHILLERS		
DESCRIPTION	STATUS	REMARKS
<b>PROJECT INFORMATION</b>		
Project Name	M/s Indian Immunological Limited	
Project Address	M/s. IIL, Rakshapuram, Gachibowli, Hyderabad, TS- 500032	
Customer Contact Name (Project)	Mr. Shaik Munvar Ali	
Customer Contact Number (Project)	9492805362	
Customer Contact Name (Maintenance)	Mr. KRV Prasadu	
Customer Contact Number (Maintenance)	9603333022	
<b>JCI INFORMATION</b>		
Region	South	
Branch	Hyderabad	
Department	ESG Service	
Sales Order Number	4513002618. #####	
Start up request date	14-Oct-21	
Commissioning Date	18-Oct-21	
Commissioning Engineer Name	Mr. Mohan Kumar S C	
<b>EQUIPMENT DATA</b>		
Unit Origin	WUXI	
Unit Model	YVWE200CA55A22WAX	
Unit Serial number	50612C10649276	
Compressor 1 Model /Sr No :	GT205L-BHWS46/50 SL NO:50682C10583683	

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DESCRIPTION	STATUS	REMARKS
Compressor 2 Model /Sr.No :		N/A
Compressor with VGD	<b>NOT APPLICABLE</b>	
Speed Code		SEMIHERIMATIC SCREW COMPRESSOR
<b>Motor Make</b>	NA	
Motor Serial Number	N/A	
Motor Input Voltage / Inrush amps / FLA	N/A	
Motor HP/Kw	N/A	
DE/NDE Bearing Number	N/A	
Insulation Class	N/A	
Type of Grease	N/A	
<b>Controller Type (Optiview/Smart View/Latitude etc....)</b>		IP22
Power Supply Board Serial Number		N/A
Microprocessor Board Serial Number		N/A
I/O Board Serial Number		21010602-92083664
CM-2 Board Serial Number		N/A
Stall Detector Board Serial Number		N/A
Display Board Serial Number		5036469-025W43786-016, 5036469-025W45462-080
E-Link Board Serial Number		N/A
HMI Board Serial Number		N/A
<b>VSD Model/Part Number</b>	YGV-0160BN-1-55AI	
VSD Serial Number	0101BN014N300001	

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DESCRIPTION	STATUS			REMARKS
VSD Logic Board Serial Number	N/A			
Filter Harmonic board Serial Number	N/A			
SCR Trigger Board Serial Number	N/A			
Surge Supression Board Number	N/A			
Bus Isolation Board Serial Number	N/A			
Coolant pump/Fan inverter board serial Number	N/A			
<b>SSS Model/Part Number</b>	Not Applicable			
SSS Serial Number	Not Applicable			
Logic/Trigger Board Serial Number	Not Applicable			
<b>EM Starter Model/Make</b>	NOT APPLICABLE			
EM Starter Serail Number	NOT APPLICABLE			
<b>VSOP Module Board Serial Number</b>	N/A			
Refrigerant Type/Qty	R134a		155Kg	
Oil Type/Qty	"YORK"L"		30ltrs	
<b>SHIPMENT DATA</b>				
Date dispatch from the factory	21	6	2021	
Standard warranty expires on	17	10	2022	
Extended warranty expires on	DD	MM	YYYY	NOT APPLICABLE
Labour covered in extended warranty or Not	NOT APPLICABLE			
Warranty Valid till	17	10	2022	
	DD	MM	YYYY	NO

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DESCRIPTION	STATUS	REMARKS
<b>DESIGN DATA</b>		
Capacity in TR		194.9TR
Evaporator water flow (GPM)		518USGPM
Evaporator pressure drop in ft of water		14
Evaporator Inlet water temperature		53.60 Deg F
Evaporator Outlet water temperature		44.60 Deg F
No.of Passes in Evaporator		2
No.of Tubes in Evaporator		-
Condenser water flow (GPM)		620.3USGPM
Condenser pressure drop in ft of water		13
Condenser Inlet water temperature		87.80 Deg F
Condenser Outlet water temperature		96.80 Deg F
No.of Passes in Condenser		2
No.of Tubes in Condenser		-
<b>SYSTEM STARTUP ACTIVITIES:</b>		
<b>1.POWER</b>		
Supply of starter by Customer or JCI	JCI	VSD
Check for proper input power cable termination to the HT /LT /SSS/VSD starter	Completed	VSD
Check for proper power cable termination between HT /LT starter to Motor	Completed	LT
Check for proper 415 Volt Power supply termination to Oil pump If HT/LT starter	Not Applicable	NOT APPLICABLE
Check for proper Control cable termination to the controller If HT/LT Starter	Not Applicable	NOT APPLICABLE

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DESCRIPTION	STATUS	REMARKS
Check for proper Earthing between Motor/Controller/Starter panel to the Main earthing	Completed	Completed
Check and Specify the incoming size of the cable (Sq.mm)	Completed	70Sqmm copper flexible mutli stand 2 run per phase
Check and Specify the Control cable size (Sq.mm)	2.5Sqmm	
Check the incoming cable type	Copper	copper flex cable
Any any panel work/modification for cable entry/provision are carried out	NO	
Confirm the cleanliness of panel from debris ,dust and block gaps if any	Completed	Dust was present, we have cleaned it
Confirm Clean , neat wiring ,cut excess cable length and removal of unwanted material from the electrical panel.	Completed	Cleaned it
Check and remove If customer provided any Power factor correction capacitors are in line with VSD chiller if equiped with harmonic filter.	Not applicable	
Remove factory provided jumber between 15 - 53 if the chiller supplied with EM starter and same need to be wired thru EM starter interlock	Not applicable	
Check the Power cables ,control cables, communication cables and sensor wires are isolated properly	Isolated	
Check the Individual earthing provided in the Condenser and Evaporator are connected to the Main erathing	Completed	Connected to condenser, Evaporator and VSD panel
Check the wirings of condenser and evaporator flow switch and irection of the flow switch installed properley ( Arrow in the flow switch should towards water flow direction)	Completed	
Check the connection of wiring between Space heater and controller are completed	Not Applicable	
Check and confirm wiring between Motor Bearing temperature sensor with controller are connected	Not Applicable	
<b>2.CHILLER</b>		
Check and confirm is there any shipping damage, If so mention in remarks	NO	
Check and confirm is there any site or storage damage ,if so mention in remarks	NO	
Check and confirm if any Visible leaks in the Chiller if so pl	NO	
Check the Unit is in proper level in its installation	Proper in Level	

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DESCRIPTION	STATUS	REMARKS
Check the Isolation pads/Spring isolators are placed properly	Mounted Properly	Neoprin rubber pads
Check and specify adequate space for operation and maintenance and mention the adjacent distance in meter	YES	surround 1mtr clearence
Check any damage in the thermal Insulation	NO	
Remove all excess materials from internal of the chiller ,all control and electrical panel	Removed	
Check the motor foundation bolt tightness	NOT APPLICABLE	
Remove the grease vent plug and apply new recommended grease to Motor bearings untill the old grease comes out	Not applicable	
Check and specify the factory charged N2 Pressure availability in condenser and evaporator	Available	8 Psig
Open all interconnecting valves between evaporator-condenser-compressor	YES	
Relaese the factory charged N2 Pressure form the system to atmosphere	YES	
Remove the Oil pour cap from the shaft seal assembly and fill the necessary amount of oil to lubricate the shaft seal and then remove the compressor - Motor coupling	Not Applicable	
Pressure test the system with N <sub>2</sub> upto 90% of the DWP or lowest pressure point in the system (relief valve)	YES	
Hold the N <sub>2</sub> pressure 8-24 Hours and if no drop in the pressure considering ambient temperature then system consider as tight	YES	150PSIG tested and holded for 24h
Vacuum the system upto 500 Micron and hold for 4 Hours . Maximum allowed raise in the vacuum is 200 Micron <b>Note</b> :If found Continues raise in vacuum is indication of moisture presence or leakage	Completed	No increse in vacuum
Charge and specify the required Oil based on the compressor size ( Refer IOM )	NOT APPLICABLE	Precharged York "L" Oil and charge
Chagre the refrigerant as vapour to the saturation temperature of refrigerant as mentioned below.Further charge as liquid upto 80% of the charge mentioned in the name plate. <b>Note : Ensure continuous water flow across evapoartor and condenser during refrigerant charging.</b> R22 - Sat TemP 40 Deg F and 68.6 Psig R407c - Sat Temp 40 Deg F and 63.2 Psig R410A -Sat Temp 40 Deg F and 118.6 Psig R134a - Sat Temp 40 Deg F and 35 Psig	YES	R134a

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DESCRIPTION	STATUS	REMARKS
***If chiller supplied with factory charged refrigerant check and specify the standing pressure of the system	NOT APPLICABLE	
<b>***Remove start signal wire from the control panel and apply Main power to do below checking</b>		
Check the Phase sequence (R-Y-B)	CORRECT	Found Sequence ok
Check and specify the control power input voltage should be 110VAC / 230 VAC	CORRECT	234.3 VAC
Check and specify the voltage between Netural-Ground	CORRECT	0.4 V
Check and specify the oil pump input voltage	NOT APPLICABLE	-
Check and specify main input voltage (400/415/3.3 KV/6.6 KV/11 KV)	CORRECT	415/3PH/50HZ
Check heater operation and specify the current drawn	CORRECT	3.6A
Download the History print,running print and normal operation carried out in the factory	NOT APPLICABLE	Hand writing log sheet
In refrigerant charged system start oil pump manually and lubricate the shaft seal	NOT APPLICABLE	
Check and specify the current drawn by oil pump	NOT APPLICABLE	
Remove the coupling assembly ,check and record the alignment data if the Motor ,compressor assembled in field <b>(During this work the Main power supply should kept off)</b>	NOT APPLICABLE	
Check the stater sequence (Cold test) before energizing power supply for Low voltage EM starter <b>(During this test Main power supply to the contactor should be disconnected condition)</b>	NOT APPLICABLE	
Check and specify the star -Delta change over time during cold test <b>(During this test Main power supply to the contactor should be disconnected condition)</b>	NOT APPLICABLE	
Check and proper operation of transient resistor contactor during starter sequence <b>(During this test Main power supply to the contactor should be disconnected condition)</b>	NOT APPLICABLE	
Check and confirm the HT panel test as per the electrical standard and collect test report from the installation dept <b>(During this test Main power supply to the contactor should be disconnected condition)</b>	NOT APPLICABLE	
Check and specify the safety set points provided in the relay fixed in HT panel and attach the set point list	NOT APPLICABLE	
Check and record the Motor winding insulation value with apporiate the insulation tester before connecting the termianls or after removing terminals	YES	

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DESCRIPTION	STATUS	REMARKS
Check and record the Motor winding insulation value with appropriate the insulation tester before connecting the terminals or after removing terminals	YES	
Check and confirm the proper direction of CT coil	YES	
Verify the jumpers position as mentioned in the manual 160.54.M1 for Centrifugal chiller	NOT APPLICABLE	
Check and confirm the Program setpoint as per the service Manual and attach setpoint print list (Form No : 160.54M1)	NOT APPLICABLE	
Drain the factory charged corrosion inhibitor in SSS/VSD coolant tank and charge few litres of new coolant and circulate for an hour and half or until seeing clean condition of circulating coolant and then fill the new coolant upto the required level	NOT APPLICABLE	air cooled VSD
Calibrate PRV /SV if applicable	NOT APPLICABLE	Semi hermetic screw compressor
Calibrate VGD if applicable	NOT APPLICABLE	Semi hermetic screw compressor
Calibrate Refrigerant level sensor if required	NOT APPLICABLE	FACTORY CALIBRATED
Verify the all pressure transducer reading with Gauge	YES	
Verify the RWT,LWT and ambient temperature sensor readings with thermometer	YES	
Check the operation PRV	NOT APPLICABLE	
Check the operation of VGD	NOT APPLICABLE	
Check the operation of Variable orifice actuator	YES	EEV
Check the operation of Hot gas bypass valve actuator if applicable	NOT APPLICABLE	
Check the Evaporator and condenser water flow switches are installed in a straight section of leaving water piping at least 5 X pipe diameters clear of elbows	YES	
Check and confirm condenser and evaporator flow switch operation	YES	
Check the coolant Pump / fan operation in VSD panel in SSS only Coolant Pump	NOT APPLICABLE	
Check logic board operation by manually pressing test button provided in the logic board and confirm the LED illumination as per the VSD service manual	NOT APPLICABLE	

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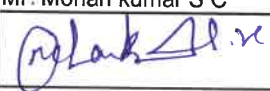
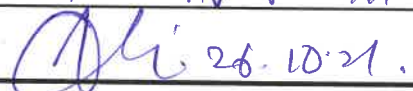
DESCRIPTION	STATUS	REMARKS
<b>3.ACCESSORIES</b>		
Check the completion of flushing evaporator pipe line after installing perforated sheet at the inlet of evaporator and the same need to removed condition before startup	YES	
Check the completion of flushing of Condenser pipe line after installing perforated sheet at the inlet of evaporator and the same need to removed condition before startup	YES	
Check and ensure proper supports are given for condenser and evaporator pipe lines near the inlet of the chiller	YES	
Check the availability pressure gauge and thermometer in condenser and evaporator	YES	
Check the availability balancing valve in evaporator	NOT APPLICABLE	Variable primary flow
DESCRIPTION	STATUS	REMARKS
Check the availability balancing valve in Condenser	NOT APPLICABLE	VSD condenser pumps
Check and specify the nozzle connection type Victaulic with expansion joint / Flange with expansion joint	YES	Victaulic with extension joint
Check all air has been vented from the chilled water pipe line	YES	
Check all air has been vent from the condenser water pipe line	YES	
Check and specify actual water flow rate in evaporator	NOT APPLICABLE	flow meter not available
Check and specify actual water flow rate in Condenser	NOT APPLICABLE	flow meter not available
Check and specify the pressure drop in evaporator	YES	1kg/cm2
Check and specify the pressure drop in Condenser	YES	0.5psid
Check the three way modulating valve operation in condenser if provided	NOT APPLICABLE	
Check the operation decoupler line provided in the chilled water pipe line	NOT APPLICABLE	
Is the Chiller connected with BMS	NOT APPLICABLE	NO BMS connection
Check the Primary pump connected with VFD	YES	
Check the chilled water system installed with Air separator	YES	
Check and confirm the operation auto Make up water system in chilled water pipe line	YES	
Check and confirm the operation auto Make up water system in cooling tower	YES	
Check and specify if the system is installed with Hot well and cold well configuration	YES	

Confirm the customer breaker type MCB/MCCB/ELCB/SFU and check settings are as per the chiller requirement	YES	MCCB
Specify the Cooling tower capacity in TR or Kw	YES	250TR 2 nos

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DESCRIPTION	STATUS	REMARKS
Check and record Ambient DB/WB temperature	NOT APPLICABLE	
Check and record plant room DB/WB temperature	NOT APPLICABLE	
Check and record the Sp.Gravity of the brine if applicable	NOT APPLICABLE	Water
Check and confirm water level in expansion tank	NOT APPLICABLE	
Check and confirm water level in the cooling tower	YES	
Check and confirm the minimum load availability to start the chiller	YES	Availabe
<b>STARTING SEQUENCE</b>		
<b>Do the Below activities before Startup</b>		
Check and record oil level in sight glass before startup	NOT APPLICABLE	sight glass full OIL LEVEL SWIT
Start the Oil pump manually and rotate the shaft once agin before chiller start up and record the OPD and Oil pump frequency	NOT APPLICABLE	
<b>Start the chiller and observe below parameters immediate after start up</b>		
Oil pressure Differential	N/A	
Is there any abnormal Noise	NO	
is there any abnormal Vibration	NO	
<b>At full load or maximum available load at design condition monitor below parameters</b>		
Discharge Superheat	8.9	
Specify Sub cooling	NA	
Evaporator Small Temperature Difference	0.5 DEG C	
Condenser Small Temperature Difference	0.6 Deg C	
Suction superheat	NA	
Calibrate and specify % FLA with design FLA if require for Low/High Voltage EM Starter	99.00%	199.7A



DESCRIPTION	STATUS	REMARKS
Measure and record current drawn by each phase (R,Y,B)	NA	
Measure and record input voltage while chiller running	413/409/410 VAC	
DC bus voltage shows in control panel	NA	540V
SCR Heat Sink temperature	NA	
IGBT Base plate temperature	NA	
VSD panel heat sink temperature	NA	
Sight class oil level	full	100%
Sight class refrigerant level	50%	Condenser side-level sensor
Check and confirm reduction speed (Hz) after achieving the LWT if the chiller equipped with VSD		
Download and attach the running parameters print at part load and full load	NO	Attached log sheet
Confirm the basic training provided to end user to operate the chiller as per OEM standard	YES	
<b>Note:</b>		
<p>1. Need to be maintain the constant power supply as per chiller design 415VAC.            2. Water quality to be maintained as per our JCI standards to avoid the frequent scale formation, and tube puncture.            3. Evaporator &amp; condenser water balancing to be done. &amp; Maintain the designed GPM.            4. Chiller plant to be kept clean &amp; proper shed to be provided around the chillers to avoid Rain water entry.</p>		
DATE OF REPORT	26	10 2021
COMMISSIONING ENGINEER NAME	Mr. Mohan kumar S C 26/10/2021	
SIGNATURE AND DATE	 26/10/2021.	
CUSTOMER NAME	Chaitan Kumar Sli	
SIGNATURE AND DATE WITH SEAL	 26.10.21.	

