

	SMSA P.O. Box 63259 Riyadh 11526, K.S.A.	Document ID	SMSA-HC28
	STANDARD OPERATING PROCEDURE For Operation of Chiller and Water Pumps.	Revision no.	05
		Effective Date	26-04-2025
		Next Revision Date	26-04-2023
		Function	Warehouse
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1.0 PURPOSE

- 1.1 To lay down the Procedure for Operation of Chillers and Water Pumps.

2.0 SCOPE

- 2.1 This procedure is applicable to SMSA for Operation of Chillers and Water Pumps.

3.0 ABBREVIATIONS/DEFINITION

No.	Term	Description
1	SOP	Standard Operating Procedure
2	No.	Number
3	AHU	Air Handling Unit

4.0 RESPONSIBILITY

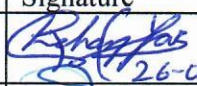
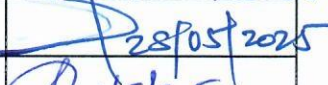
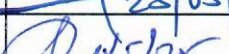
- 4.1 It is the responsibility of the SMSA Utility Executive or Designee to ensure Operation of Chiller and Water Pumps.
- 4.2 Assistant Project Manager to ensure Compliance of SOP.

5.0 PRECAUTION/INSTRUCTION

- 5.1 All Service valves on Discharge line, Suction line, Oil line and Liquid line should be open before starting the equipment.
- 5.2 Water Pump should be running before startup of Chiller.

6.0 PROCEDURE

- 6.1 Pre Start up:
- 6.1.1 Turn ON the main Power.
- 6.1.2 Start Water Pump and check water pressure.
- 6.1.3 All inlet and outlet valves should be open.
- 6.2 Start up: After completing Prestart up procedure, Chiller is ready to start.
- 6.2.1 Press the START key on screen.

	Name & Designation	Signature
Author/ Originator of Doc Change	REHAN YAFAI UTILITY EXECUTIVE	 26-04-2025
Reviewer (Process Owner)	M. J. M. Jareed Warehouse Supervisor	 28/05/2025
Approving Authority	DAISY SINGH	

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- 6.2.2 If required adjust the Setpoints on screen.
- 6.2.3 Verify Chilled water Pump should be running at least 1 minute before running Chiller.
- 6.2.4 After Chiller Start up wait for 10 minutes for stabilization. After the stability record operating parameters in Annexure-1 and take readings after every 2 hours.
- 6.3 Shutdown: For shutting down Chiller need to follow following steps:
- 6.3.1 Press the STOP key on the screen, the compressor will continue to and after unloading for 20 seconds ,will stop when compressor contactor de-energize.
- 6.3.2 Stop the circulation by turning off Chilled water pumps after at least 1 minute.
- 6.3.3 Close inlet and Outlet valves.
- 6.3.4 Switch OFF main power supply.
- 6.3.5 Record Chiller Stop time in Chiller Operation log.

7.0 RECORD

Title of Record	Custodian	Retention Period
500 Ton Chiller Daily Parameter Monitoring Record	Utility Executive	Indefinite

8.0 Attachment

NA

9.0 DOCUMENT CHANGE RECORD

Rev No.	Effective Date	Nature of Change	Document Change Request No:
00	01-07-2017	New Document	NA

	Name & Designation	Signature
Author/ Originator of Doc Change	REHAN YAFAI UTILITY EXECUTIVE	
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01	11-02-2018	Changes Made in the SOP as follows	
02	11-02-2020	- SOP Document ID amended as SMSA-HC unique ID format for all SOP. - SOP Reviewed and No change required.	
03	16-03-2022	Changes Made in the SOP as follows. - Amended point 4.2 Project Manager to ensure Compliance of SOP. - Amended point 6.2.4 After Chiller Start up wait for 10 minutes for stabilization. After stability record operating parameters in Annexure-I and take reading after every 2 hours. - Amended point 6.3.5 Record Chiller Parameter in Chiller Operation log.	
04	01-05-2023	Amended Annexure-I	
05	26-04-2025	Amended Annexure-I	

	Name & Designation	Signature
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Reviewer (Process Owner)	M. J. M. Jareel Warehouse Supervisor	 28/05/2025
Approving Authority	PAKIST SINGH	 28/05/2025

Chiller No.-

Date:

		Time →			
Chiller	Evaporating Leaving Temperature(44 F-54 F)				
	Evaporating Entering Temperature(45 F-58 F)				
	Outdoor Air Temperature(F)				
	Water Inlet Pressure(Bar)(3.0-4.5)				
Compressor 1A	Water Outlet Pressure(Bar)(2.8-4.5)				
	Chilled Water Setpoint(F)(45-55)				
	(Amps)L1 L2 L3				
	Unit Volts (V)(380 V-415 V)				
Compressor 1B	Oil Temperature (90-175 F)				
	Intermediate Oil Pressure (32-275 PSI)				
	Sction Pressure (30-50 PSI)				
	(Amps)L1 L2 L3				
Compressor 2A	Oil Temperature (90-175 F)				
	Intermediate Oil Pressure (32-275 PSI)				
	Sction Pressure (30-50 PSI)				
	(Amps)L1 L2 L3				
Compressor 2B	Oil Temperature (90-175 F)				
	Intermediate Oil Pressure (32-275 PSI)				
	Sction Pressure (30-50 PSI)				
	(Amps)L1 L2 L3				
External	Flow Switch				
Done By					
Verified By					