



**Refurbishment of Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in HVAC Plant at GIK Institute, Topi**

# **TENDER DOCUMENTS**

**Issued By**

Director (Works & Projects)

Ghulam Ishaq Khan Institute of Engineering Sciences &  
Technology, Topi, Swabi

Email: [Director.engineeringprojects@giki.edu.pk](mailto:Director.engineeringprojects@giki.edu.pk)

## 7th TIME-TENDER NOTICE

### Refurbishment of Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in HVAC Plant

1. GIK Institute invites interested and qualified contractors to submit proposals for the refurbishment of a Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in the HVAC Plant of our facility located at GIK Institute, Topi Swabi.
2. Primary work including dismantling of existing shell, supply of material and replacement of the evaporator shell made of carbon steel along with refrigerant coils, complete in all respects. Gas charging along with dryer cores replacement, repair of tubes and fixing of all tubes is also part of the work.
3. In addition following items will be also tested and replaced, if damaged / out of order wherever required;
  - a. Repair or replacement of expansion valves and liquid line solenoid valves.
  - b. Testing and commissioning of the chiller to ensure it meets the required operational standards and efficiency.
  - c. Checking and repairing of the electrical control system of each circuit.
  - d. Repair or replacement/checking of the motor protection circuit of each compressor.
  - e. Checking and repair of 3 Nos condensers.
  - f. Any other repair work found during the system check.
4. Interested contractors must meet the following requirements:
  - a. Prior experience and expertise in repairing and maintaining chillers in HVAC systems.
  - b. Certificates regarding HVAC repairs in Public/Private Sectors and compliance with all local regulations and safety standards.
  - c. Submission of a detailed breakdown of costs, including labor, materials, equipment, taxes, and any additional charges.
5. Interested contractors are requested to download the tender documents from the GIK Institute website. The project will be required to be completed within one month.
6. Processing fee of Rs 2,000/- (Nonrefundable) shall be submitted with the proposal. All tenders must be submitted in two sealed envelopes, one for Technical and the other for Financial Proposals along with 2% bid security of the total bid cost in the name of GIK Institute. Envelopes should be clearly marked "Tender for Chiller Repair – HVAC System" and addressed to the Director (Works & Projects) not later than 04 Dec 2024 at 1100 hrs. **The proposals will be opened in the presence of available bidders at 1130 hours on the same day** in the office of Director (Works & Projects), GIKI, Topi, Swabi. The Institute reserves the rights to accept or reject any tender and to cancel the tender process or reject all tenders at any time prior to the award without incurring any liability. For any query / detail contact Engr. Haneef Khan) 0348-1913963 & 0300-5684692.

Director (Works & Projects)

GIK Institute, Topi, Swabi

Email. [Director.engineeringprojects@giki.edu.pk](mailto:Director.engineeringprojects@giki.edu.pk)

# **GENERAL RULES AND DIRECTIONS**

## ***FOR GUIDANCE OF CONTRACTORS***

GIK Institute invites interested and qualified/eligible firms to participate in the tender for the repair and refurbishment of a 240-ton capacity Chiller.

The firms may visit GIKI during working hours on any day prior to the tender deadline for pre bid meeting.

### **Chiller Details:**

Model: WPCD-5270B

Type: Water-Cooled Reciprocating Chiller

Capacity: 240-ton

Location: HVAC Plant, GIK Institute, Topi Swabi

### **Scope of Work**

Primary work including dismantling of existing shell, supply of material and replacement of the evaporator shell made of carbon steel along with refrigerant coils, complete in all respects. Gas charging along with dryer cores replacement, repair of tubes and fixing of all tubes is also part of the work.

In addition following items will be also tested and replaced, if damaged / out of order wherever required;

- a. Repair or replacement of expansion valves and liquid line solenoid valves.
- b. Testing and commissioning of the chiller to ensure it meets the required operational standards and efficiency.
- c. Checking and repairing of the electrical control system of each circuit.
- d. Repair or replacement/checking of the motor protection circuit of each compressor.
- e. Checking and repair of 3 Nos condensers.

### **Technical Specifications**

#### I. Chiller Details:

Model: SKM WPCD-5270B

Type: Water-Cooled Reciprocating Chiller

Capacity: 240-ton

Location: HVAC Plant, GIK Institute, Topi Swabi

#### II. Evaporator Shell and Refrigerant Coils:

Material: High-grade corrosion-resistant material.

Replacement Criteria: Replace if damaged, corroded, or degraded performance.

Coil Material: Copper or other material meeting industry standards.

#### III. Gas Charging and Dryer Cores:

Refrigerant: R22 (Gentran Honeywell USA)

Charging Procedure: Follow manufacturer guidelines.

Dryer Cores: High-efficiency cores meeting industry standards.

IV. Expansion Valves and Solenoid Valves:

Replacement Criteria: Replace if malfunctioning or not meeting performance standards.

V. Electrical Control System:

Components: Ensure functionality of relays, contactors, and controllers.

Communication Protocol: Confirm compatibility and coordination.

Safety Features: Verify proper functioning of safety interlocks.

VI. Motor Protection Circuit:

Protection Devices: Overload relays, thermal protection devices.

Criteria for Replacement: Replace if not meeting safety standards.

VII. Condensers:

Inspection Criteria: Check for corrosion, damage, or reduced heat exchange efficiency.

Repair: Address identified issues to restore optimal performance.

VIII. Testing and Commissioning:

Performance Testing: Conduct comprehensive performance tests.

Commissioning Procedures: Follow industry-standard commissioning protocols.

Operational Standards: Ensure compliance with specified operational standards.

## **Submission Guidelines**

I. Tender Document Download:

Interested contractors are requested to download the complete tender documents from the GIK Institute website.

II. Eligibility Check:

Before preparing and submitting the tender, contractors must ensure that they meet all the qualification criteria outlined in the tender documents.

Contractors must submit two sealed envelopes:

Technical Proposal

Financial Proposal

Both envelopes should be clearly marked "Tender for Chiller Repair – HVAC System."

Evaluation Process:

The evaluation of tender proposals will be based on the criteria outlined in the tender documents.

The Institute reserves the right to accept or reject any tender and to annul the tender process without incurring any liability.

Inquiries and Clarifications:

For inquiries or clarifications regarding the tender, interested contractors may contact:

Director (Projects), GIK Institute, Topi, Swabi -

## **Technical Evaluation Criteria (Total 100 marks)**

### **1. Experience and Expertise (40 points):**

Past Experience in repairing and maintaining Water-Cooled Reciprocating Chillers, particularly SKM models (20 points).

In hand projects of similar chiller refurbishment (20 points).

### **2. Financial Stability (20 points):**

Financial stability and capability to manage costs associated with chiller repair (20 points).

**3. Health and Safety Protocols (10 points):**

Demonstrated commitment to and implementation of robust health and safety protocols for personnel involved in chiller repair projects.

**4. Capacity and Resources (30 points):**

Confirmation of the contractor's capacity to handle the scope of work outlined in the tender (15 points).

Availability of skilled personnel, tools, and equipment necessary for the successful completion of the project (15 points).

**Budget and Payment Terms**

I. The payment schedule for the project will be as follows:

Milestone 1 (Advance Payment): No advance payment is allowed.

Milestone 2 (Final Payment): Final payment shall be made on the total contract amount upon the successful testing and commissioning of the chiller and final acceptance by GIK Institute.

II. Invoice Submission:

Invoice should be submitted in accordance with the payment schedule.

Invoice should be addressed to the Director (Engineering Projects) at GIK Institute.

III. Performance Security:

The successful contractor will be required to provide a performance security, in the form of a bank guarantee or another acceptable instrument, equivalent to 10 % of the total contract amount.

The performance security should be submitted within 10 days after the signing of the contract.

IV. Retention Amount:

A retention amount of 10 % of each milestone payment will be retained by GIK Institute until 03 months after the successful completion and acceptance of the entire project.

The retention amount will be released to the contractor after 03 months of the final acceptance of the chiller.

**Timeline**

I. Commencement of Work:

The contractor is expected to commence work immediately after signing the contract agreement and proceed with the refurbishment project within 01 month.

**Format of Contract Agreement**

This Contract Agreement (the "Agreement") is entered into on this [Insert Date], by and between:  
GIK Institute

[Insert Organization's Full Legal Name and Address]

Hereinafter referred to as the "Institute"

and

[Contractor's Full Legal Name]

[Insert Contractor's Address]

Hereinafter referred to as the "Contractor"

1. Scope of Work:

The Contractor agrees to perform the repair and refurbishment of the Water-Cooled Reciprocating Chiller, identified as SKM Model No. WPCD-5270B, located in the HVAC Plant at GIK

Institute, Topi Swabi, in accordance with the specifications and scope of work outlined in Exhibit A attached hereto.

2. Commencement and Completion:

2.1 The Contractor shall complete work within one month after acceptance of Work Order.

3. Quality Assurance:

The Contractor shall adhere to all quality assurance measures specified in Exhibit A to ensure that all repair and replacement activities meet industry standards.

4. Health and Safety:

The Contractor is responsible for implementing and maintaining robust health and safety protocols for all personnel involved in the project, in compliance with local regulations.

5. Insurance:

The Contractor shall maintain comprehensive insurance coverage, including liability insurance, throughout the duration of the project.

11. Amendments:

Any amendments to this Agreement must be made in writing and signed by both parties.

12. Termination:

Either party may terminate this Agreement in accordance with the termination provisions outlined in Exhibit C attached hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement as of the date first above written.

GIK Institute

Signature: \_\_\_\_\_

[Name and Title of Authorized Signatory]

[Contractor's Full Legal Name]

Signature: \_\_\_\_\_

[Name and Title of Authorized Signatory]