REQUEST FOR QUOTATION (RFQ)

Equipment / Material Requisition

Submersible Motor Pump (Drainage Service)



Document No: Doc-101-SYS-SMP-0001 REV: 001

0	24.04.2026	Issue for Quotation	APP'D
1	17.04.2026	Issue for Quotation	APP'D
2	10.04.2026	Issue for Quotation	APP'D

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1. Introduction

[I: SYS-SMP-001]

The system is a **submersible motor pump** intended for drainage and grey water applications, operating under submerged conditions in stationary or transportable installations.



Figure 1: Submersible Motor Pump

2. System Requirements

2.1 Functional Requirements

[A: SYS-SMP-002]

The system shall pump grey water and drainage water from submerged environments and shall transport fluids containing solid particles up to 12 mm in diameter.

2.2 Performance Requirements

[A: SYS-SMP-003]

The system shall deliver a maximum flow rate of at least 130 m^3/h.

[A: SYS-SMP-004]

The system shall achieve a maximum head of at least 26 m and operate at immersion depths up to 7 m (standard version).

2.3 Mechanical Requirements

[A: SYS-SMP-005]

The system shall be designed as a close-coupled, single-stage pump and shall incorporate a vertical discharge outlet.

The motor shall comply with EN 60043 T1. The insulation of motors must be class B and degree of protection shall be IP68.

The system shall operate continuously at fluid temperatures up to 50°C.

The system shall operate continuously at fluid temperatures up to 40°C for wear-resistant variants (B/BH).

The system shall withstand fluid temperatures up to 90°C for a duration not exceeding 3 minutes.
The system shall operate at immersion depths up to 10 m (variant B/BH).

2.3 Mechanical Requirements

[A: SYS-SMP-006]

The system shall use an open multi-vane impeller. The system shall include a double mechanical sealing system consisting of:

- one seal on the pump side
- one seal on the motor side
- an intermediate lubricant chamber

[I: SYS-SMP-07]

Maintenance-free rolling element bearings are incorporated in the system design.

2.4 Electrical Requirements

[A: SYS-SMP-08]

The system shall include an electric motor suitable for submersible operation. The motor shall support direct-on-line and star-delta starting methods. The motor shall comply with IEC 60038 voltage standards.

[A: SYS-SMP-08]

The motor shall have insulation class B and protection class IP68 and include integrated thermal protection switches.

2.5 Material and Environmental Requirements

[A: SYS-SMP-09]

The system shall be constructed from corrosion-resistant materials suitable for grey water.
The system shall include coated hydraulic components for corrosion protection.

[A: SYS-SMP-10]

The system shall support operation in abrasive fluids when configured as variant B/BH.

2.6 Interface Requirements

[A: SYS-SMP-11]

The system shall provide a discharge connection suitable for vertical piping integration and electrical interfaces compatible with standard industrial power systems.

3. Legal and Contractual Requirements

3.1 Compliance with Regulations

[A: SYS-SMP-12]

The Supplier shall ensure that the submersible motor pump and all associated components comply with all applicable local, national, and international laws, regulations, and standards in force at the time of delivery.

[A: SYS-SMP-13]

The equipment shall meet all relevant directives related to electrical safety, environmental protection, and mechanical integrity (e.g., CE marking where applicable).

[A: SYS-SMP-14]

Compliance with relevant standards such as DIN, ISO, and IEC is mandatory.

3.2 Warranty Obligations

[A: SYS-SMP-15]

The Contractor shall provide a minimum warranty of:

- 24 months from commissioning or
- 30 months from delivery (whichever occurs first)

During the warranty period:

- All defects shall be corrected at no cost
- Response time for critical failures shall not exceed 48 hours

Spare parts availability shall be guaranteed for a minimum of 10 years.

3.3 Health, Safety, and Environmental (HSE) Requirements

[A: SYS-SMP-16]

The Contractor shall comply with all occupational safety regulations.

The equipment must ensure safe operation under submerged conditions. Hazardous substances shall be avoided or declared in accordance with EU regulations.

4 Technical Requirements

ID	Parameter	Requirement / Specification
[A: SYS-SMP-18]	Pump Type	Submersible centrifugal pump
[A: SYS-SMP-19]	Rated Flow (Q)	50 m^3/h
[A: SYS-SMP-20]	Motor Type	Submersible, squirrel cage induction motor

ID	Parameter	Requirement / Specification
[A: SYS-SMP-21]	Power Supply	400 V ±10%, 50 Hz, 3-phase
[A: SYS-SMP-22]	Protection Class	Minimum IP68
[A: SYS-SMP-23]	Insulation Class	Class F or higher
[A: SYS-SMP-24]	Cooling Method	Liquid-cooled (surrounding medium or jacket)
[A: SYS-SMP-25]	Max. Liquid Temperature	Minimum 40°C
[A: SYS-SMP-26]	Shaft Material	Stainless steel
[A: SYS-SMP-27]	Bearings	Heavy-duty, grease lubricated
[A: SYS-SMP-28]	Cable Type	Submersible, watertight
[A: SYS-SMP-29]	Dry Run Protection	Required (thermal or sensor-based)
[A: SYS-SMP-30]	Noise Level	≤ 50 dB(A)
[A: SYS-SMP-31]	Coating	Corrosion-resistant epoxy coating
[A: SYS-SMP-32]	Control System Compatibility	Compatible with PLC/SCADA
[A: SYS-SMP-33]	Standards Compliance	DIN / ISO / IEC applicable standards
[A: SYS-SMP-34]	Testing	Factory Acceptance Test (FAT) required
[A: SYS-SMP-35]	Documentation	Manuals, drawings, certificates

6. Background

[I: SYS-SMP-36]

The contracting authority is seeking to modernize its IT infrastructure to improve service delivery. This procurement forms part of a wider sustainability programmed across public services.

5. Technical Drawing

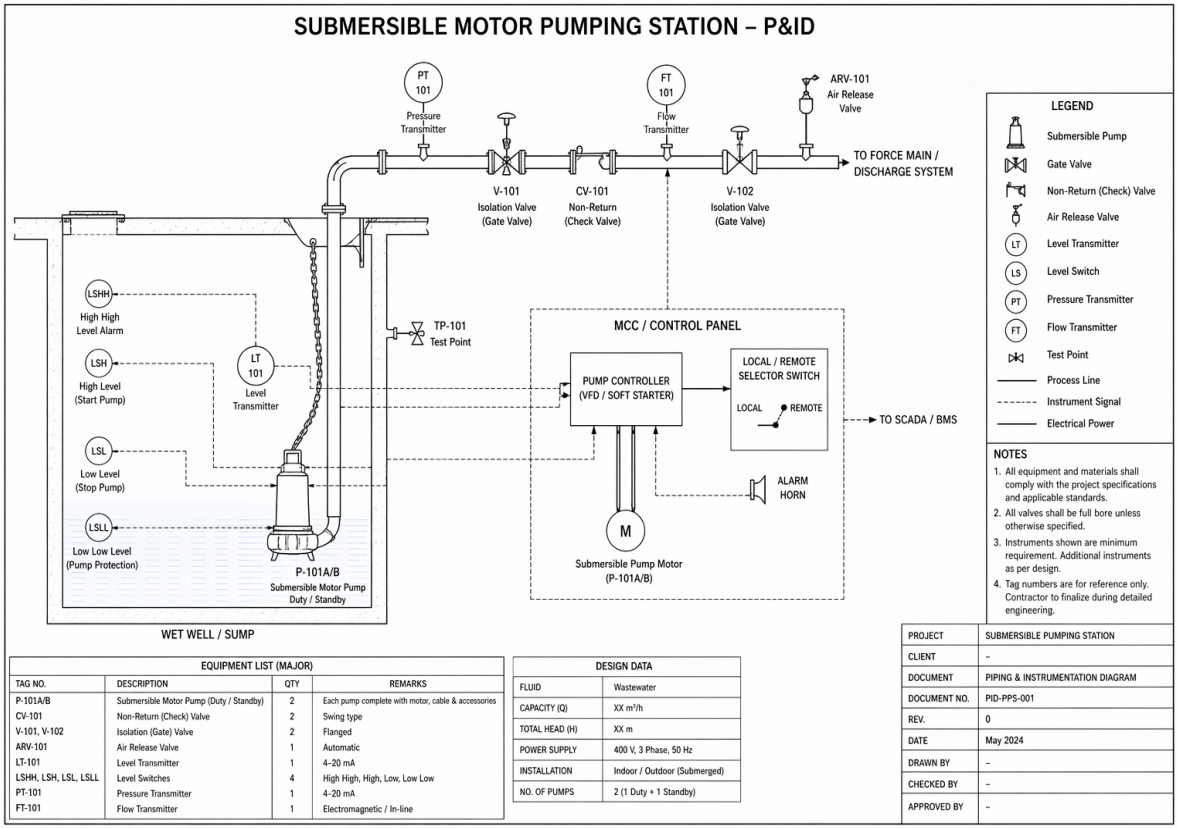


Figure 2: Submersible Motor Pumping Station PID Diagram

7. Scope of Requirement

[I: SYS-SMP-37]

The contract covers the supply, installation, and maintenance of 250 desktop computers.

Services are required across all regional offices within the stated geography.