**Technical Specifications and Trial Directives of Portable Water Pump**

| S.N. | Parameters | Technical Specifications | Trial Directives |
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| 1. | **General Requirement** | Petrol engine with single stage centrifugal pump, max output 1400 L/min, max pressure 7.0 Bar | BOO to check and verify the parameter through OEM certificate. |
| 2. | **Engine Type** | Twin cylinder four stroke | BOO to physically check and verify the parameter through OEM certificate. |
| 3. | **Power** | Not more than 13.4 KW (18.0 HP) at 3600 RPM | BOO to check and verify the parameter through lab test report from Govt./NABL lab. |
| 4. | **Speed Control** | Factory set mechanical governor | BOO to check and verify the parameter through OEM certificate. |
| 5. | **Cooling** | Forced ventilation, ducted path crankshaft driven | BOO to check and verify the parameter through OEM certificate. |
| 6. | **Electrical System** | 12 V negative earth system with battery charging arrangement | BOO to check and verify the parameter through OEM certificate. |
| 7. | **Angle of Operation** | 15 deg. from horizontal in any plane | BOO to check and verify the parameter through OEM certificate. |
| 8. | **Exhaust** | Silencer arranged to direct exhaust gas away from operator | BOO to physically check and verify the parameter. |
| 9. | **Starting** | Electric start with manual recoil type start as standby | BOO to physically check and verify the parameter. |
| 10. | **Ambient Temperature Range** | Full power continuous operation -15° C to +40° C | BOO to check and verify the parameter through lab test report from Govt./NABL lab. |
| 11. | **Fuel Tank Capacity** | Sufficient to run for not less than 1.5 hours at rated output when operating at its rated output | BOO to physically check and verify the parameter. |
| 12. | **Pump Type** | Single stage centrifugal mounted on extension of crank shaft of engine, heat-treated Aluminium alloy, corrosion protected, Pump comprises volute body (casing), impeller, two screw down type delivery outlet of 63mm (IS 901) and 100 mm suction with round thread (IS 902) | BOO to check and verify the parameter through OEM certificate |
| 13. | **Drain Plug** | At bottom of Pump Casing | BOO to physically check and verify the parameter. |
| 14. | **Valve** | Delivery valve fitted with 63mm female hose connection and black cap | BOO to physically check and verify the parameter. |

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| 15. | **Seal** | Maintenance free Spring loaded mechanical carbon seal for shaft sealing | BOO to physically check and verify the parameter. |
| 16. | **Pump Performance** | Pump performance should comply with BIS-12717 standards. Pump should achieve over and above the given parameters: Min 350 Ltr/min - 7.0 bar, Min 600 Ltr/min - 6.0 bar, Min 800 Ltr/min - 5.0 bar, Min 1400 Ltr/min - 2.0 bar | BOO to check and verify the parameter through OEM certificate |
| 17. | **Primer** | Reliable and effective priming system, primes from 7.0 m within 30 seconds at NTP conditions. | BOO to physically check and verify the parameter through OEM certificate. |
| 18. | **Framework** | Tubular steel or equivalent, anti-vibration pads, four folding handles, carried by two men | BOO to physically check and verify the parameter through OEM certificate. |
| 19. | **Weight** | Total dry weight with battery not exceeding 85 kg | BOO to physically check and verify the weight. |
| 20. | **Instrumentation** | Throttle control, primer control, ignition interrupter switch, pump suction compound gauge, pump delivery pressure gauge, battery charge indicator, adjustable flood light, pump run hour meter | BOO to physically check and verify the parameter. |
| 21. | **Marking** | Output capacity in LPM, manufacturer's name and trade name, weight, year of manufacture, serial number, engine number | BOO to physically check and verify the parameter. |
| 22. | **Workmanship and Finish** | Good workmanship, painted in Fire Red colour | BOO to physically check and verify the parameter. |
| 23. | **Test** | Static hydraulic test of 1.5 times the maximum working pressure. Four hours endurance test continuously, deep lift test from 7 meters. Before delivery of the product, testing to be conducted at firm facility by buyer. | BOO to physically check and verify the parameter through OEM certificate. |
| 24. | **Equipment** | 100 mm dia. Suction hose 4.5 meters with gunmetal suction hose coupling (2 Nos), Suction wrenches (2 Nos), Metal strainer (gm) (1 No), Basket strainer for 100 mm dia metal strainer (1 No), Canvas cover to cover the pump (1 No) | BOO to physically check and verify the parameter through OEM certificate. |

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| 25. | **Tools** | De spanner 01 set (6 Nos), Insulated cutting pliers (1 No), Ring spanner set (6 Nos), Nose pliers (1 No), Monkey pliers (1 No), Screwdrivers (2 Nos), Small metallic toolbox to carry all tools (1 No) | BOO to physically check and verify the parameter through OEM certificate. |
| 26. | **Operation and Spares Manual** | Complete operation, maintenance and detailed spare part manual to be supplied with unit. | BOO to check and verify the parameter through relevant certificate. |
| 27. | **Guarantee** | 24 months from the date of supply, Maintenance and service support - 08 Years | BOO to check and verify the parameter through relevant certificate. |