

Asset Details

- Asset ID: PMP01
- Asset Name: Water treatment pump 1
- Manufacturer: Ebara
- Model: EVMSL64-5_2-30
- Rated Power: 30.0 kW
- Rated Voltage: 400.0 V
- Location: PUB Station Bedok

Performance Summary

- Data Period: 2025-10-01 to 2025-11-30
- Total Power Consumption: 24.5 MWh

| Parameter | Average | Min | Max | Std Dev |
|-------------------|---------------|---------------|---------------|---------------|
| Power Consumption | 23.2 kWh | 22.02 kWh | 28.33 kWh | 1.28 kWh |
| Temperature DE | 59.03 °C | 55.0 °C | 72.22 °C | 3.53 °C |
| Temperature NDE | 59.32 °C | 55.28 °C | 72.58 °C | 3.55 °C |
| Vibration DE | 3.89 mm/s RMS | 3.3 mm/s RMS | 5.55 mm/s RMS | 0.46 mm/s RMS |
| Vibration NDE | 3.97 mm/s RMS | 3.37 mm/s RMS | 5.66 mm/s RMS | 0.47 mm/s RMS |

Operational Status

- All signals exhibit flat trends over the monitoring period.
- Power consumption remains stable with low variability (std 1.28 kWh).
- Temperature at both DE and NDE bearings shows stable operation with consistent mean values near 59 °C.
- Vibration levels at both DE and NDE are stable with mean values below 4.0 mm/s RMS.
- No missing data points recorded (0.0% missing rate across all signals).
- Asset is operating continuously within normal parameters.

Risk Assessment

- Vibration DE mean 3.89 mm/s RMS and NDE mean 3.97 mm/s RMS are within API 610 Preferred Operating Region (0.28 to 5.0 mm/s RMS). Maximum vibration DE 5.55 mm/s RMS and NDE 5.66 mm/s RMS exceed POR threshold and enter Allowable Operating Region (5.0 to 6.5 mm/s RMS), indicating occasional elevated vibration events requiring monitoring.
- Temperature DE max 72.22 °C and NDE max 72.58 °C indicate elevated bearing temperatures during peak operation periods.
- Power consumption variability is minimal with std 1.28 kWh, indicating consistent load conditions.
- Overall risk is moderate due to intermittent vibration peaks entering AOR zone and elevated temperature maxima, though mean values remain acceptable.