

## Operating Environmental Conditions for Timing Belts

To ensure optimal performance, reliability, and extended service life of timing belt systems, the following environmental operating conditions must be strictly observed:

### 1. Ambient Temperature

- **Standard Range:**  $-30^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$
- **Special Applications:** High-temperature-resistant belts are required for operations exceeding  $+80^{\circ}\text{C}$ .
- **Impact of Non-Compliance:** Temperatures outside this range may cause material degradation, reduced tensile strength, or premature failure.

### 2. Contamination Prevention

- **Prohibited Substances:** Water, oil, grease, solvents, or corrosive chemicals must not contact the belt surface.
- **Immediate Action:** In case of contamination, clean the belt immediately using a dry cloth or approved non-abrasive cleaner.
- **Consequence of Exposure:** Slippage, accelerated wear, or chemical corrosion.

### 3. Foreign Particle Ingress Protection

- **Requirement:** Install fully enclosed protective covers in environments with dust, metal particles, or debris.
- **Maintenance Protocol:**
  - Conduct regular inspections of cover seals and structural integrity.
  - Ensure pulleys and belt paths remain free of accumulated contaminants.
- **Risk of Non-Compliance:** Abrasive damage to belt teeth or pulley grooves, leading to misalignment or system failure.

### Safety & Compliance Note

- **Periodic Verification:** Environmental conditions must be routinely monitored and documented to ensure ongoing compliance.
- **Non-Conformance:** If operating conditions cannot be maintained within specified limits, **contact technical support immediately** for:
  - System redesign evaluation

- Alternative belt material selection
- Custom engineering solutions

For technical assistance, please provide:

- Equipment model and application details
- Operating environment specifications (temperature, contaminants, duty cycle)

Our engineering team will perform a detailed analysis and recommend optimized solutions.

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