

Introduction to the C 240 M 3 Spec Sheet

In the world of industrial machinery and precision engineering, few documents carry as much weight as a well-structured specification sheet. Among the many models that professionals encounter, the **C 240 M 3 spec sheet** stands out as a critical reference point for engineers, technicians, procurement specialists, and maintenance teams alike. Whether you are evaluating this component for a new installation or replacing an existing unit in a demanding workflow, understanding every detail of the C 240 M 3 spec sheet is essential for making informed decisions.

This article offers a deep dive into the C 240 M 3 spec sheet, breaking down its technical parameters, performance metrics, dimensional data, and practical applications. We will explore what makes this model a reliable choice in its category, how its specifications translate into real-world performance, and why consulting the spec sheet before purchase or installation is a non-negotiable step. By the end, you will have a thorough grasp of the C 240 M 3 spec sheet and how to interpret its data for your specific needs.

What Is the C 240 M 3?

The C 240 M 3 is a robust and versatile piece of equipment commonly found in industrial, commercial, and sometimes agricultural settings. While the exact nature of the device can vary depending on the manufacturer and application context, the designation "C 240 M 3" generally refers to a motor, pump, compressor, or similar electromechanical unit designed for continuous duty in demanding environments. The spec sheet for this model provides a standardized way to communicate its capabilities, limitations, and installation requirements.

Understanding the C 240 M 3 spec sheet means recognizing that each alphanumeric element in the model name conveys specific information. The "C" often denotes a series or frame type, "240" may indicate power rating, speed, or size class, and "M 3" frequently refers to mounting configuration, phase type, or revision level. The spec sheet clarifies these details so that end users can match the unit to their operational requirements without guesswork.

Key Sections of the C 240 M 3 Spec Sheet

General Specifications and Identification

Every reliable C 240 M 3 spec sheet begins with a section that identifies the product and its basic category. This includes the manufacturer name, model number, and a brief description of the unit's intended use. You will typically find the following elements in this section:

- **Model designation:** C 240 M 3
- **Product type:** e.g., three-phase induction motor, centrifugal pump, or rotary compressor
- **Manufacturer:** Name of the OEM
- **Serial number range:** For traceability
- **Date of manufacture or revision:** Ensures you are referencing the latest spec sheet version

This introductory portion of the C 240 M 3 spec sheet establishes a clear identity for the unit. It prevents confusion with similar models and provides a starting point for deeper technical evaluation. Always verify that the spec sheet you are consulting matches the exact model you are working with, as even minor variations in the model number can lead to significant differences in performance.

Electrical Parameters

For any motor-driven or electrically powered device, the electrical specifications are among the most critical data on the C 240 M 3 spec sheet. These values determine whether the unit can be integrated into your existing power infrastructure and how efficiently it will operate. Key electrical parameters include:

- **Voltage rating:** Typically expressed in volts (V), such as 230/460 V or 400 V depending on regional standards
- **Frequency:** Usually 50 Hz or 60 Hz, which affects rotational speed and torque
- **Phase:** Almost always three-phase for the C 240 M 3, given its industrial design
- **Full load current (FLA):** Measured in amperes (A), this helps size circuit breakers, contactors, and wiring
- **Starting current (LRA):** Important for understanding inrush demands during startup
- **Power factor:** Indicates how effectively the unit converts electrical power into mechanical work
- **Insulation class:** Typically Class F or H, defining thermal tolerance

The C 240 M 3 spec sheet often includes a table of electrical data for multiple voltage configurations, allowing the same unit to be used in different regions. For example, you might see a row for 230 V operation and another for 460 V, with corresponding current and torque values. This flexibility is one reason the C 240 M 3 is popular among global equipment manufacturers.

Mechanical and Dimensional Data

A thorough C 240 M 3 spec sheet dedicates substantial space to mechanical characteristics. These details are vital for mounting, coupling to driven equipment, and ensuring adequate clearance for cooling and maintenance. Expect to find the following:

- **Frame size:** Standardized dimensions that determine mounting bolt patterns and shaft height
- **Shaft diameter and length:** Critical for coupling alignment and keyway dimensions
- **Overall dimensions:** Length, width, and height in millimeters or inches
- **Weight:** Net weight of the unit, important for handling and structural support
- **Mounting configuration:** Foot-mounted, flange-mounted, or a combination (e.g., C 240 M 3 may use a specific B3 or B5 configuration)
- **Enclosure type:** TEFC (Totally Enclosed Fan Cooled), ODP (Open Drip Proof), or explosion-proof depending on application

Dimensional drawings are often included in the C 240 M 3 spec sheet as a separate page or appendix. These drawings show exact tolerances, bolt hole locations, and clearance requirements. When planning an installation, never rely solely on nominal dimensions; always cross-reference with the spec sheet drawing to avoid costly fitment issues.

Performance Characteristics

The performance section of the C 240 M 3 spec sheet translates technical specifications into operational expectations. This is where you find the data that directly impacts productivity and energy consumption. Key performance metrics include:

- **Rated power output:** In kilowatts (kW) or horsepower (HP)
- **Rated speed:** Revolutions per minute (RPM) at full load
- **Torque values:** Starting torque, pull-up torque, and breakdown torque expressed as a percentage of full-load torque

- **Efficiency:** Percentage of input power converted to mechanical output, often at full load and partial load points
- **Service factor:** A multiplier that indicates how much overload the unit can handle continuously without damage
- **Noise level:** Sound pressure in decibels (dB) at a standard distance
- **Vibration limits:** Measured in mm/s or inches per second

For the C 240 M 3 spec sheet, efficiency data is increasingly important as energy costs rise and environmental regulations tighten. Many modern spec sheets include efficiency curves or reference to standards such as IE3 or IE4 (International Efficiency classes). If the C 240 M 3 is part of a continuous process, even a small efficiency improvement can yield significant annual savings.

Environmental and Operating Conditions

No machine operates in a vacuum, and the C 240 M 3 spec sheet provides clear guidance on the environmental conditions under which the unit can function reliably. This section covers:

- **Ambient temperature range:** Typically -20°C to +40°C for standard units, with derating factors for higher temperatures
- **Altitude limit:** Usually up to 1000 meters without derating; higher altitudes require power reduction due to thinner air
- **Humidity tolerance:** Maximum relative humidity, often 95% non-condensing
- **Ingress Protection (IP) rating:** Such as IP55, indicating dust and water jet resistance
- **Cooling method:** IC 411 (self-ventilated) or other standard classification
- **Duty cycle:** S1 (continuous duty) is typical for the C 240 M 3, but other ratings like S2 or S3 may apply for specific variants

Understanding these limits on the C 240 M 3 spec sheet is crucial for long-term reliability. Installing the unit in an environment that exceeds its rated conditions can void warranties and lead to premature failure. Always compare your site conditions with the spec sheet before finalizing the purchase.

Applications of the C 240 M 3

Thanks to its balanced combination of power, efficiency, and durability, the C 240 M 3 finds use across a wide spectrum of industries. Consulting the C 240 M 3 spec sheet helps professionals match the unit to specific tasks. Common applications include:

- **Pumping systems:** Water supply, wastewater treatment, chemical processing, and irrigation
- **HVAC equipment:** Fans, blowers, and compressors in commercial and industrial buildings
- **Conveyors and material handling:** Belt drives, roller drives, and elevators
- **Machine tools:** Lathes, milling machines, and presses

- **Compressed air systems:** Reciprocating or screw compressors driven by the C 240 M 3 motor
- **Agricultural machinery:** Feed pumps, augers, and ventilation fans

The C 240 M 3 spec sheet often includes a list of recommended applications or at least notes on the types of loads the unit is designed to handle—constant torque, variable torque, or constant power. This guidance helps engineers avoid misapplication that could lead to overheating or mechanical stress.

Interpreting the C 240 M 3 Spec Sheet for Selection

Choosing the right equipment for a given task requires more than just glancing at the C 240 M 3 spec sheet. A systematic approach is necessary to ensure all parameters align with the requirements of the driven load and the installation environment. Here is a step-by-step method for using the spec sheet effectively:

1. **Define the load requirements:** Determine the power, speed, and torque needed by the driven equipment.
2. **Check the electrical supply:** Verify that the voltage, frequency, and phase match one of the configurations listed on the C 240 M 3 spec sheet.
3. **Evaluate environmental conditions:** Compare ambient temperature, humidity, altitude, and exposure to dust or moisture with the spec sheet limits.
4. **Assess mounting and space:** Confirm that the footprint, shaft dimensions, and mounting style of the C 240 M 3 fit the available space and interface.
5. **Review performance curves:** Look at efficiency, torque, and current curves to ensure the unit will operate in its optimal range under normal load.
6. **Consider accessories and options:** The spec sheet may list available add-ons such as encoders, brakes, thermostats, or special coatings.
7. **Verify compliance:** Check for certifications like CE, UL, CSA, or ATEX if required by your industry or region.

By following this process with the C 240 M 3 spec sheet in hand, you reduce the risk of selecting an undersized or incompatible unit. Many manufacturers also offer online selection tools that integrate with the spec sheet data, making the process faster while maintaining accuracy.

Maintenance Insights from the C 240 M 3 Spec Sheet

A well-designed spec sheet does more than aid initial selection; it also supports ongoing maintenance and troubleshooting. The C 240 M 3 spec sheet typically includes or references