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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 30145-2025

Replacing GB/T 30145-2013

**YZP series variable-frequency adjustable-speed three-phase
induction motors for crane and metallurgical applications -
Technical specification (frame sizes 450 to 500)**

YZP系列起重及冶金用变频调速三相异步电动机 技术规范 (机座号450~500)

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Standardization Administration of the PRC**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 30145-2013 "Technical Conditions for YZP Series Variable Frequency Speed Control Three-Phase Asynchronous Motors for Lifting and Metallurgical Use (Frame Size)". Compared with GB/T 30145-2013, the main technical changes in the standard (Nos. 450~500) are as follows, except for structural adjustments and editorial changes.

---The section on "electric drives" has been removed (see Chapter 1 of the.2013 edition);

---Added motor model and example descriptions (see 4.1);

---Added "Can also be made into a Y-connection according to user needs" (see 4.5);

---The constant torque frequency range has been changed from "1~50" Hz to "3~50" Hz (see Table 1,.2013 version of Table 1);

---The D1 dimension of the frame size 500 motor has been changed (see Tables 2 and 3,.2013 editions of Tables 2 and 3);

---The limit deviations for the key width of the motor shaft extension have been changed (see Table 4,.2013 edition of Table 4);

---Added the clause "The motor should be able to guarantee constant torque or constant power operation within the specified frequency range" (see 5.4);

---The outgoing wire direction of the motor and fan junction box has been changed (see 5.5, 4.18 of the.2013 version), and "protective grounding terminal except..." has been added. Besides serving as protective grounding, it should not be used for any other purpose (see

5.5);

---Added requirements for the appearance and assembly quality of the electric motor (see 6.1);

---Added the clause "The cold insulation resistance value should not be lower than 5MΩ (see 6.2);

---Added. "The deviation of any phase of the DC resistance of the three-phase stator winding of the motor in the actual cold state from the average value of the three phases should not exceed..." "±1.5% (Delta connection) or ±2% (Y connection) of the average value" (see 6.3);

1 Scope

GB/T 30145-2025 is the Chinese national standard covering the large inverter-fed crane motor - the torque held down to standstill and the cooling that has to work when the fan is barely turning, the insulation against inverter voltage spikes, the duty cycles of a steelworks crane, and the bearing currents. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 30145-2013.

This document specifies the types and basic specifications of YZP series variable frequency speed-regulating three-phase asynchronous motors (frame size 450~500) for hoisting and metallurgical applications. The parameters, dimensions, general requirements, and technical requirements describe the corresponding test methods and specify the inspection rules, marking, packaging, and shelf life. This document applies to three-phase asynchronous motors (frame size 450~500) used in various lifting machinery and metallurgical auxiliary equipment powered by frequency converters. The manufacture of.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Pictorial Symbols for Packaging and Storage

GB/T 755 Ratings and Performance of Rotating Electrical Machines

GB/T 756 Cylindrical Shaft Extensions of Rotary Electrical Machines

GB/T 757 Conical Shaft Extensions of Rotary Electrical Machines

GB/T 997 Classification of structural types, mounting types and junction box locations of rotating electrical machines (IM codes)

GB/T 1096 General-purpose flat keys

GB/T 1958 Product Geometric Specification (GPS) - Geometric Tolerance Inspection and Verification

GB/T 1971 Markings on wire ends and direction of rotation for rotating electrical machines

GB/T 1993 Cooling methods for rotating electrical machines

GB/T 4772.2 Dimensions and power ratings of rotating electrical machines - Part

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.