

ICS 21.120.99

CCS J 19



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

GB/T 43757-2024

Sink disks

锁紧盘

Issued on: March 15, 2024

Implemented on: October 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Type classification	1
5 Basic parameters and main dimensions	3
6 Technical Requirements	8
7 Test methods	9
8 Inspection Rules	9
11 Appendix B (Informative) Rated load test method for locking disc	12

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1. Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document is proposed and coordinated by the National Technical Committee for Standardization of Machine Shafts and Accessories (SAC/TC109). This document was drafted by: Shanxi Daxin Transmission Technology Co., Ltd., China Machinery Productivity Promotion Center Co., Ltd., Taiyuan University of Science and Technology, Heavy Equipment (Deyang) Co., Ltd., Datong Bashika Machinery Manufacturing Co., Ltd., Sichuan Machinery Research and Design Institute (Group) Co., Ltd. Taishun Jinda Metallurgical Machinery Co., Ltd., Sichuan Ruidi Jiayuan Machinery Co., Ltd., Nanjing Gongnuo Technology Co., Ltd., Hubei Power Transmission Co., Ltd. INTELLIGENT MANUFACTURING INNOVATION CENTER LIMITED. The main drafters of this document are. Zhang Xinhui, Cheng Peng, Wang Jianmei, Zhang Wei, Jiang Yangchun, Gao Guanhua, Zhuang Ying, Xia Zhaokong, Shan Hui, Shi Dong, Chen Jingyu, Huang Lichao. Locking disc

1 Scope

China's national standard for sink disks. A sink disk is a plate of ceramic or composite material used as a heat sink and electrical insulator in power electronics packaging - the component that sits between a semiconductor die and the metal baseplate, conducting the device's heat away while isolating its electrical potential from the housing. Those two

requirements normally conflict, since the good thermal conductors are metals and the good insulators are not, and the materials that satisfy both are few: alumina, aluminium nitride, silicon nitride and beryllia. Which is used is a straightforward trade - aluminium nitride conducts far better than alumina and costs several times more, silicon nitride is tougher and survives thermal cycling that cracks the others. As power modules for electric vehicles and renewable inverters have grown, the mechanical durability of this component under cycling has become the limiting factor.

This document specifies the type classification, basic parameters and main dimensions, technical requirements, test methods, inspection rules, marking, packaging of locking discs. And storage. This document is applicable to the locking disc connecting the shaft and the sleeve, with a rated torque of $0.32\text{kN}\cdot\text{m}\sim 17946\text{kN}\cdot\text{m}$ and an axial force of $25\text{kN}\sim 35892\text{kN}$, working environment temperature is $-40^{\circ}\text{C}\sim 150^{\circ}\text{C}$.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 191 Pictorial markings for packaging, storage and transportation

GB/T 228.1 Tensile test of metallic materials Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 It is a keyless connection device consisting of an inner ring, an outer ring, and bolts, which transmits torque and axial force through friction generated by locking sleeves.

4 Type classification

4.1 Type There are two types of locking discs. SJP1 and SJP2 (see Table 1).