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NATIONAL STANDARD OF  
THE PEOPLE'S REPUBLIC OF CHINA

中华人民共和国国家标准 **GB**

**Code for design of compressed air station**  
**压缩空气站设计规范**

**GB 50029-2003**

Issue date: April 15, 2003

Implementation date: June 1, 200

Jointly issued by: General Administration for Quality Supervision, Inspection and Quarantine of  
the People's Republic of China

Ministry of Construction of the People's Republic of China

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THE PEOPLE'S REPUBLIC OF CHINA

# **Code for design of compressed air station**

## **GB 50029-2003**

Chief Edition Department: China Machinery Industry Federation

Approved by: Ministry of Construction of the People's Republic of China

Implementation date: June 1, 2003

**Proclamation by Ministry of Construction  
of the People's Republic of China**

**No. 139**

Proclamation on the national standard publishing of Code for Design of Compressed Air Station. Code for Design of Compressed Air Station, in number of GB 50029-2003, is hereby approved to be a national standard and executed from June 1, 2003. Clause 3.0.6, 3.0.11, 3.0.12, 3.0.14, 4.0.7(2)(4), 4.0.12, 6.0.3, 6.0.8 and 6.0.9 are compulsory clauses and should be strictly executed. At meanwhile, the former Code for Design of Compressed Air Station GBJ29-90 is avoided.

China Planning Press publishes this code under the organization of Standard Norm Study Station of Ministry of Construction.

**Ministry of Construction of the People's Republic of China  
April 15, 2003**

## Forewords

To meet the requirement from Jianbiao [1997] No. 108 Writ issued by the Ministry of Construction, the revised Code is achieved base on Code for Design of Compressed Air Station GBJ 29-90 by China Machinery International Engineering Design and Research Institute (the eighth Study Institute of former the Ministry of Machinery Industry) together with other departments.

During the revision, after widely investigation and study, careful conclusion was made on experience respect of design and application since the former Code was executed. Related domestic and abroad information were referred, in addition with necessary tests. After auditing and finalizing, the Ministry of Construction in No. 139 Proclamation publishes the Code for execution.

The code is divided into nine chapters with six attachments. Revision is major on: a clause on centrifugal air compressor is added, former contents on helical-lobe compressor, drying/purification of compressed air, environment protection, energy-saving, safety in production and labor protection were revised or added.

All of the clauses in black in the code are obligatory ones and should be strictly executed. Obligatory clauses in the code are response for explanation by the Ministry of Construction while China Machinery International Engineering Design and Research Institute in charge specific technical contents. During future execution of the code, we will be pleased to accept careful experience conclusion in conjunction with engineering practice. Any opinion and suggestion can be post to China Machinery International Engineering Design and Research Institute (Address: No.18, Shaoshanzhonglu, Changsha City; Post code: 410007; Fax: 0731-5551914) for reference in further revision.

The organization department, chief edition department, deputy chief edition department, joint departments, assistant departments and main drafter are as follows:

Organization department: China Machinery Industry Investigation and Design Association

Chief edition department: China Machinery International Engineering Design and Research Institute (the eighth Study Institute of former the Ministry of Machinery Industry)

Deputy chief edition department: Wuxi Compressor Co., Ltd.

Joint edition departments:

Hunan Metallurgical Planning and Design Institute

The Third Design and Study Institute of the Ministry of Machinery Industry

The Fourth Design and Study Institute of the Ministry of Machinery Industry

China Machinery International Engineering Consulting and Design Institute

China Aviation Industry Planning, Design and Study Institute

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## 1 General

1.0.1 This code is revised for safety production, environment protection, energy saving, laboring conditions improving, technical advancing and economic in compressed air station design.

1.0.2 This code can be applied to the new-building, reconstruction or expansion of compressed air station and pipe for both piston air compressor and helical-lobe air compressor which operate pressure is less or equals to 1.25 MPa (gauge pressure), or centrifugal air compressor which is less or equals to 500 m<sup>3</sup>/min (unit air displacement).

This code cannot be applied to the design for compressed air station and pipe at underground well, cave and any other special locations.

1.0.3 Except E grade for compressed air station with cylinder oil-free lubrication piston air compressor and non-oil spraying helical-lobe air compressor, fire hazard danger class for any other compressed air stations are all D grade.

1.0.4 Former building, equipment and pipe should be fully utilized during design of reconstruction and expansion of compressed air station and pipe.

1.0.5 Beside this code, any current national provision on obligatory standard should be followed in design of compressed air station and pipe.



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