

ICS 23.040.60

J 15



**NATIONAL STANDARD OF THE PEOPLE'S**

**REPUBLIC OF CHINA**

**中华人民共和国国家标准**

**GB/T 9124-2010**

**Replace GB/T 9124-2000**

---

**Specification for Steel Pipe Flanges**

**钢制管法兰 技术条件**

**Issued on Jan 14, 2011**

**Implemented on Oct 01, 2011**

---

**Issued by the General Administration of Quality Supervision, Inspection and Quarantine of  
the People's Republic of China & Standardization Administration of China**

## Contents

<b>Foreword</b> .....	1
<b>1 Scope</b> .....	3
<b>2 Normative Reference</b> .....	3
<b>3 Materials</b> .....	4
<b>4 Pressure – temperature rated values</b> .....	10
<b>5 Dimensions and tolerance</b> .....	10
5.1 Dimensions .....	10
5.2 Dimensional tolerance .....	42
<b>6 Joint sealing face</b> .....	46
<b>7 Fasteners and gaskets</b> .....	47
7.1 Fasteners .....	47
7.2 Gasket .....	47
<b>8 Type and dimensions of welded end</b> .....	47
<b>9 Machining and Manufacturing</b> .....	47
<b>10 Test</b> .....	48
11.1 Inspection .....	48
11.2 Acceptance .....	48
<b>12 Labeling</b> .....	49
<b>13 Requirements of supply</b> .....	49
<b>Annex A (Normative) Types and dimensions of welded end</b> .....	50
<b>Annex B (Normative) Press-temperature rated value of Class designated flange</b> .....	58
<b>Annex C (Informative) Reference mass</b> .....	59
<b>Annex D (Informative) Data under the contract of goods order</b> .....	78
<b>Annex E (Informative) Pipe schedule number and wall thickness of steel pipes</b> .....	79
<b>Annex F (Informative) Reference dimensions of some flanges with PN designation other than the scope of this standard</b> .....	1
<b>Annex G (Informative) Material selection of ASME B16.5 standard steel pipe flange and pressure-temperature rated value</b> .....	2

## Foreword

GB/T 9112~9124-2010 *Steel Pipe Flanges* series adopts for ASME B16.5-2009 *Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard* and EN 1092-1: 2007 Flanges and their joints. Circular flanges for pipes, valves, fittings and accessories, PN designated. Steel flanges. ASME B16.5-2009 is a complete standard of Class flange, EN 1092-1: 2007 is a complete standard of PN flange. This series adopts for above two standards, including the relevant technical contents of Class flange and PN flange. There are thirteen standards of this series, this Standard is a part of this series.

Comparison with ASME B16.5-2009 and EN 1092-1: 2007, main changes of this Standard are as follows:

- The written format of this Standard is different with ASME B16.5-2009 and EN 1092-1: 2007;
- ASME B16.5-2009 contains flange and flanged fitting, this Standard does not contain flanged fitting;
- The order contract data of flange is not given in ASME B16.5-2009 and EN 1092-1: 2007, as informative annex, this standard is given;
- SchXX and wall thickness of steel pipe is not given in ASME B16.5-2009 and EN 1092-1: 2007, as informative annex, this standard is given;
- This Standard adopts the flanged materials in China, pressure-temperature rating refers to ASME B16.5-2009 and EN 1092-1: 2007, otherwise, the flanged materials and pressure-temperature rating involved in ASME B16.5-2009 for reference as informative annex;

This Standard will replace GB/T 9124-2000 Specification for steel pipe flanges, comparison with original standard, main changes of this Standard are as follows:

- According to EN 1092-1: 2007 and related standards in China, carry out thorough revision of selecting of PN flange and pressure-temperature rating;
- According to ASME B16.5-2009 and related standards in China, carry out thorough revision of selecting of Class flange and pressure-temperature rating;
- According to EN 1092-1: 2007 and ASME B16.5-2009, carry out thorough revision of dimensional tolerance;
- According to EN 1092-1: 2007, added the reference mass to PN flange, as per calculation, added the reference mass to Class flange;
- As normative annex, added the pressure-temperature rating of Class flange;
- As informative annex, added the selection of steel pipe flanges and pressure-temperature rating as shown in ASME B16.5;
- As informative annex, added the order contract data;
- As informative annex, added the SchXX and wall thickness of steel pipe;
- As informative annex, added the reference dimension of partial PN flange out of this Standard;
- According to ASME B16.5-2009, revised the nominal pressure of flange of America System in original standard; PN 20 to Class 150, PN 50 to Class 300, PN 110 to Class 600, PN 150 to Class 900, PN 260 to Class 1500, PN 420 to Class 2500.

The annex A, annex B of this Standard is normative, annex C, annex D, annex E, annex F, annex

G is informative annex.

This Standard was proposed by China Machinery Industry Federation.

This Standard was under the jurisdiction of National Technical Committee 237 on Pipe Fitting of Standardization Administration of China.

Draft units of this Standard: Zhejiang CHAODA Valve Co., Ltd, China Productivity Center for Machinery(CPCFM), Baoyi Group Co., Ltd, East China Design Company, China Petroleum Engineering & Construction Corp, North East Electric Power Design Institute of China Power Engineering Consulting Group Corporation, Sinopec Engineering (SEI), Huanqiu Contracting and Engineering Corp, Zhejiang High-strength Fastener Co., Ltd, Jiangsu Haida Fitting Group and Hebei Shengtian Group Baoyin High-pressure Flange Fitting Co., Ltd.

Main drafters of this Standard: Qiu Xiaolai, Li Junying, Liu Jian, Liu Hongfu, Huang Tao, Chen Yongliang, Ma Xueya, Chen Youjun, Feng Feng, Ge Haiquan, Li Jian and Li Baoyin.

The previous edition of the part replaced by these following one:

— GB/T 9124-1988, GB/T 9124-2000.

## Specification for Steel Pipe Flanges

### 1 Scope

This Standard specifies the materials of steel pipe flanges and blind flange, pressure-temperature rating, dimension and tolerance, connection flange sealing surface, fasteners and gasket, type and dimension of welding end, processing and manufacturing, test, inspection and acceptance, supply requirements and reference mass.

This Standard is applicable to the steel pipe flanges and blind flange those specified in GB/T 9112 to GB/T 9123.

### 2 Normative Reference

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

- GB/T 152.4 Fasteners-Counterbores for hexagon bolts and nuts
- GB/T 699 Quality carbon structural steels
- GB/T 700 Carbon structural steels
- GB/T 711 Hot-rolled quality carbon structural steel plates and wide strips
- GB 712 Hull structural steel
- GB 713 Carbon and low alloy steel plates for boilers carbon and alloy steel plates for boilers
- GB/T 1220 Stainless steel bars
- GB/T 3274 Hot-rolled plates and strips of carbon structural steels and high strength low alloy structural steels
- GB 3531 Low alloy steel plates for low temperature pressure vessels
- GB/T 4237 Hot rolled stainless steel plate sheet and strip
- GB/T 7306.1 Pipe threads with 55 degree thread angle where pressure-tight joints are made on the threads--Part 1: Parallel internal and taper external threads
- GB/T 7306.2 Pipe threads with 55 degree thread angle where pressure-tight joints are made on the threads--Part 2: Taper internal and external threads
- GB/T 9112 Types and parameters for steel pipe flanges
- GB/T 9113 Integral steel pipe flanges
- GB/T 9114 Hubbed screwed steel pipe flanges
- GB/T 9115 Steel pipe welding neck flanges
- GB/T 9116 Hubbed slip-on-welding steel pipe flanges
- GB/T 9117 Hubbed socket welding steel pipe flanges
- GB/T 9118 Loose hubbed steel pipe flanges with welding neck collar
- GB/T 9119 Slip-on-welding plate steel pipe flanges
- GB/T 9120 Loose plate steel pipe flanges with weld-neck collar and with weld ring neck
- GB/T 9121 Loose plate steel pipe flanges with weld-on collar

---

---

## 完整版本请在线下单

或咨询：

TEL: 400-678-1309

QQ: 19315219

Email: [info@lancarver.com](mailto:info@lancarver.com)

<http://www.lancarver.com>

---

---

## 线下付款方式：

### 1. 对公账户：

单位名称：北京文心雕语翻译有限公司

开户行：中国工商银行北京清河镇支行

账 号：0200 1486 0900 0006 131

---

---

### 2. 支付宝账户：info@lancarver.com

---

---

注：付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！

---



银联特约商户