

Q11F 铜球阀

Q11F Brass Ball Valve

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开维喜阀门集团有限公司
Kaiweixi Valve Group Co., Ltd.

Q11F 铜球阀

型号: Q11F-16T
公称压力: 1.0Mpa-2.5Mpa
适用温度: ≤120℃
连接方式: 内螺纹
其他参数: 制造标准按 GB/T12237

规格: DN15-DN50
适用介质: 水及类似于水的介质
阀体材质: 铜
驱动方式: 手动、气动、电动

Q11F Brass Ball Valve

Model: Q11F-16T
Nominal Pressure: 1.0Mpa-2.5Mpa
Applicable Temperature: ≤120℃
End Connection :NPT
Other Parameters: Manufacturing standard according to GB/T12237.

Specifications: DN15-DN50
Applicable Media: Water and water-like media
Body Material: brass
Operation: Manual, pneumatic, electric

Q11F 铜球阀概述

Q11F 铜球阀是一种采用黄铜阀体与内螺纹连接的紧凑型球阀，采用整体式或分体式结构，通过旋转阀杆带动球体实现 90 度快速启闭。阀体由锻造黄铜制成，具有优良的耐腐蚀性和机械强度，阀座采用聚四氟乙烯（PTFE）等软质密封材料确保可靠密封。该阀门结构简单、体积小、重量轻，适用于水、油、空气等非腐蚀性介质，工作压力通常为 PN16-PN40，广泛应用于建筑给排水、暖通系统、小型设备及一般工业管路中，是一种经济实用的基础流体控制阀门。

Q11F Brass Ball Valve Overview

The Q11F brass ball valve is a compact ball valve featuring a brass body and internal thread connections. It is available in one- piece or split- body designs, operating via a 90° stem rotation to quickly open or close the ball. The valve body is made of forged brass, offering excellent corrosion resistance and mechanical strength, while the seat is made of soft sealing materials such as PTFE (polytetrafluoroethylene) to ensure reliable sealing. With its simple structure, small size, and light weight, this valve is suitable for non- corrosive media such as water, oil, and air, typically operating at pressures ranging from PN16 to PN40. It is widely used in building water supply and drainage systems, HVAC systems, small- scale equipment, and general industrial pipelines, serving as an economical and practical basic fluid- control valve.



Q11F 铜球阀产品图
Q11F Brass Ball Valve Product Image

Q11F 铜球阀特点

1. 黄铜阀体耐腐蚀：采用锻造黄铜材质，强度高、耐腐蚀性好，不易生锈，适用于多种常见流体介质。
2. 结构紧凑安装方便：内螺纹连接方式结构短小，安装空间要求低，可快速完成管路连接。
3. 优良密封性能：PTFE 阀座与球体形成软密封，密封可靠，操作扭矩小，启闭轻便灵活。
4. 经济实用寿命长：制造成本低，维护简单，黄铜材料耐久性好，综合性价比高。
5. 适用范围广：适用于-20℃至 150℃温度范围的非腐蚀性介质，是家庭、商业及一般工业流体控制的通用选择。

Q11F Brass Ball Valve Features

1. Corrosion-Resistant Brass Body

Made of forged brass with high strength and excellent corrosion resistance, it is not prone to rust and suitable for a variety of common fluid media.

2. Compact Design for Easy Installation

The internal thread connection features a short and compact structure, requiring minimal installation space and allowing quick and straightforward pipeline connection.

3. Excellent Sealing Performance

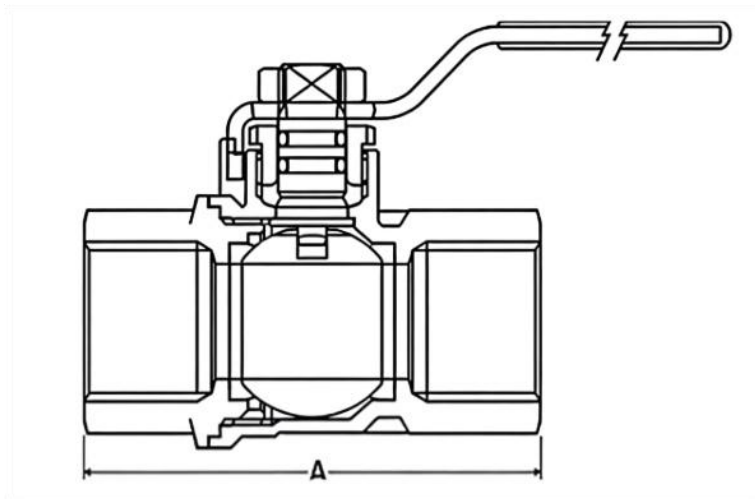
The PTFE seat forms a soft seal with the ball, ensuring reliable sealing and low operating torque, which allows for smooth and effortless opening and closing.

4. Cost-Effective and Long Service Life

With low manufacturing costs and simple maintenance, the durable brass material provides high overall cost-effectiveness and longevity.

5. Wide Range of Applications

Suitable for non-corrosive media within a temperature range of -20°C to 150°C, making it a versatile choice for household, commercial, and general industrial fluid control applications.



Q11F 铜球阀结构图

Q11F Brass Ball Valve Structure Diagram

零部件名称材料表

Parts Name Material List

序号 NO.	名称 Name	材料 Material
1	阀体 body	黄铜、青铜 Brass, Bronze
2	球体 ball	不锈钢 stainless steel
3	密封垫 seal gasket	PTFE
4	填料 packing	弹性石墨 flexible graphite
5	阀杆 stem	黄铜 Brass
6	阀座 seat	RPTFE

性能规范表 Performance Specification

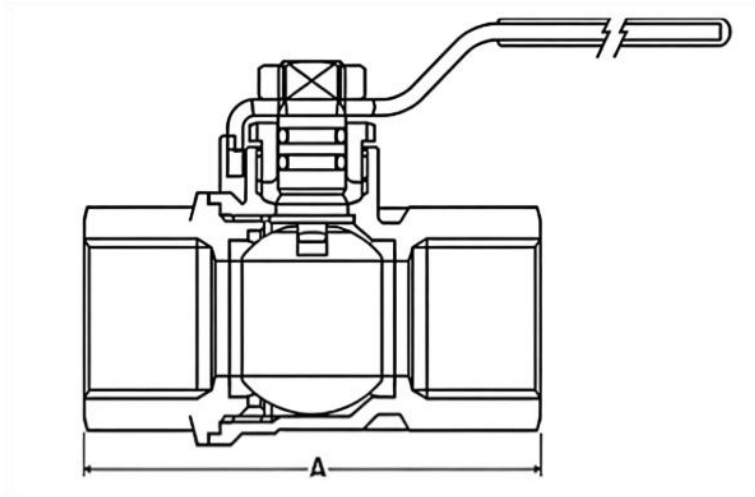
公称压力 Nominal Pressure	1.0/1.6/2.5	Mpa
强度试验压力 Shell Test	1.5/2.4/3.8	
密封试验压力 Seal Test	1.1/1.8/2.8	
适用温度 Suitable Temp.	120	℃

外形尺寸标准要求

- 1、阀门的结构长度按 GB/T12221 的标准
- 2、连接法兰按 GB9113 的标准

Dimensions Standard Requirements

1. The structural length of the valve shall conform to the standard GB/T12221.
2. The connecting flange shall conform to the standard GB9113.



Q11F 铜球阀外形图
Q11F Brass Ball Valve View Drawing

Q11F 铜球阀外形尺寸表

Q11F Brass Ball Valve Dimensions Table

DN	15	20	25	32	40	50
A	50	58	65	74	84	99

Q11F 铜球阀安装、使用与维护说明

安装指南

1. 安装前准备：核对阀门规格、压力等级和螺纹标准是否匹配管道要求。清洁阀门内腔和管道端口，确保无杂质。
2. 螺纹连接操作：在管道外螺纹上顺时针缠绕适量密封带（如聚四氟乙烯生料带）。手动旋入阀门并对准螺纹，用扳手卡住阀体六角部位均匀拧紧，避免用力过度导致阀体变形。
3. 安装方向：阀门可安装于水平或垂直管道，但需确保手柄有充足的操作空间，并能清晰判断开关位置。
4. 安装后检查：手动操作阀门全行程开关数次，确认启闭顺畅。检查螺纹连接处是否密封无泄漏。
5. 系统测试：参与管道压力试验，试验压力不得超过阀门额定压力，试验后复查密封性。

使用操作

1. 启闭操作：通过手柄旋转 90 度实现开关，手柄与管道平行时为开，垂直时为关。操作需平稳到位，勿强行超程旋转。
2. 状态确认：通过手柄位置可直观判断阀门状态，必要时可在手柄或阀体上作标记。

3. 常规使用：本阀门用于管路截断或接通，不建议用于流量调节。长期全开时建议定期进行全行程开关操作。

4. 注意事项：带压操作时应缓慢施力，若遇异常阻力应立即停止并排查原因。

维护保养

1. 定期检查：定期检查连接处有无泄漏，阀体表面有无腐蚀，手柄是否松动。

2. 内部维护：若阀门出现内漏，可能是阀座密封面磨损或杂质附着。需拆卸阀门检查清洗密封面，必要时更换阀座密封件。

3. 阀杆维护：若阀杆处出现外漏，可尝试拧紧阀杆压盖，无效时需更换密封填料。

4. 拆卸存放：拆卸前需确认系统已泄压。长期存放时阀门应处于全开或全关状态，保持端口清洁，定期活动手柄防卡滞。

5. 更换原则：若阀体出现裂纹或严重损坏，建议整体更换阀门。

Q11F Brass Ball Valve Installation, Operation, and Maintenance Instructions Installation Guide

1. Pre-installation Preparation

Verify that the valve specifications, pressure rating, and thread standard match the pipeline requirements. Clean the valve cavity and pipe ends to ensure no debris is present.

2. Threaded Connection Procedure

Wrap an appropriate amount of sealant tape (e.g., PTFE thread seal tape) clockwise around the external pipe threads. Hand-tighten the valve onto the pipe, aligning the threads correctly. Use a wrench on the hexagonal part of the valve body to tighten evenly, avoiding excessive force to prevent deformation.

3. Installation Orientation

The valve can be installed on horizontal or vertical pipelines but must have sufficient clearance for handle operation and clear visibility of the open/closed position.

4. Post-installation Inspection

Manually operate the valve through its full travel several times to confirm smooth opening and closing. Check threaded connections for leaks.

5. System Testing

Include the valve in the pipeline pressure test, ensuring the test pressure does not exceed the valve's rated pressure. Recheck sealing integrity after testing.

Operation

1. Opening/Closing Operation

Rotate the handle 90° to open or close the valve. The valve is open when the handle is parallel to the pipeline and closed when perpendicular. Operate smoothly and avoid forcing the handle beyond its travel limit.

2. Status Confirmation

The handle position clearly indicates the valve status. If needed, mark the handle or valve body for easier identification.

3. Normal Use

This valve is designed for on/off pipeline flow control and is not recommended for flow regulation. If kept fully open for extended periods, periodically cycle the valve through its full travel.

4. Important Notes

When operating under pressure, apply force slowly. If abnormal resistance is encountered, stop immediately and investigate the cause.

Maintenance

1. Regular Inspection

Periodically check connections for leaks, inspect the valve body for corrosion, and ensure the handle is secure.

2. Internal Maintenance

If internal leakage occurs, it may be due to worn seat seals or debris accumulation. Disassemble the valve to inspect and clean the sealing surfaces. Replace the seat seal if necessary.

3. Stem Maintenance

If external leakage occurs at the stem, try tightening the stem gland. If leakage persists, replace the stem packing.

4. Disassembly and Storage

Before disassembly, ensure the system is depressurized. For long-term storage, keep the valve fully open or fully closed, with ports clean and protected. Operate the handle periodically to prevent seizing.

5. Replacement Principle

If the valve body is cracked or severely damaged, replace the entire valve.

非常感谢您的阅读！

Thank you very much for reading!

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