

Q347H 上装式法兰球阀

Q347H Top-Entry Flanged Ball Valve

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开维喜阀门集团有限公司

Kaiweixi Valve Group Co., Ltd.

Q347H 上装式法兰球阀

型号: Q347H	规格: DN25-DN1200
公称压力: 1.6-32Mpa	适用介质: 水、气、油
适用温度: ≤550℃	阀体材质: 铸钢、不锈钢、合金钢、铝镍青铜
连接方式: 法兰	驱动方式: 气动、电动、手动
其他参数: 制造标准按 GB/T12237	

Q347H Top-Entry Flanged Ball Valve

Model: Q347H	Specifications: DN25-DN1200
Nominal Pressure: 1.6-32Mpa	Applicable Media: Water、Gas、 Oil
Applicable Temperature: ≤550℃	Body Material: cast steel, stainless steel, alloy
steel, Aluminum Nickel Bronze	
End Connection : flange	Operation: Manual, pneumatic, electric
Other Parameters: Manufacturing standard according to GB/T12237.	

Q347H 上装式法兰球阀概述

Q347H 上装式法兰球阀是一种采用顶部装载设计、法兰连接的高性能固定球阀。其核心特点是阀体为整体式结构，阀盖与阀体通过螺栓连接于顶部，可在不拆卸阀门从管道的情况下，通过上方开口整体装入或取出球体、阀杆及阀座等核心组件。阀门采用金属硬密封结构，专为高温、高压及严苛介质工况设计，适用于石油、天然气、化工及长输管线等关键系统，是实现可靠截断与高效在线维护的重要设备。

the Q347H Top-Entry Flanged Ball Valve Overview

The Q347H Top-Entry Flanged Ball Valve is a high-performance, trunnion-mounted ball valve designed with a top-entry configuration and flanged connections. Its key feature is an integral body structure, where the bonnet is bolted to the body from the top. This design allows for the complete assembly or removal of core components such as the ball, stem, and seats through the top opening without the need to remove the valve from the pipeline. Equipped with a metal hard-sealed structure, the valve is specifically engineered for high-temperature, high-pressure, and demanding media applications. It is suitable for critical systems in oil, natural gas, chemical, and long-distance pipeline industries, serving as essential equipment for reliable shut-off and efficient online maintenance.



Q347H 上装式法兰球阀产品图
Q347H Top-Entry Flanged Ball Valve Product Image

Q347H 上装式法兰球阀特点

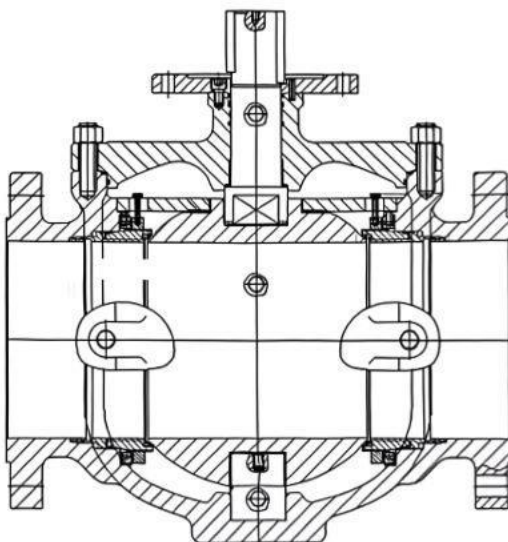
1. 上装式在线维护便捷：独特的顶部装载设计允许阀门在管线原位进行内部核心组件的快速检查、更换或维修，极大减少了维护停机时间和作业成本。
2. 整体阀体高压密封可靠：采用整体式阀体结构，无中腔泄漏风险，结合金属硬密封副（如堆焊硬质合金），确保在高压差和高温下的双向零泄漏密封。
3. 适用于严苛工况：专为高温、高压、含颗粒及腐蚀性介质设计，固定球结构配合高性能轴承，操作扭矩稳定，使用寿命长。
4. 防火与安全设计：通常符合 API 607/API 6FA 等防火标准，软密封失效后可形成金属副密封。阀杆采用防吹出和防静电结构。
5. 操作方式多样灵活：可配备手动、齿轮、电动或气动等多种驱动装置，满足不同自动化控制需求。

the Q347H Top-Entry Flanged Ball Valve Features

1. Convenient online maintenance with top-entry design: The unique top-loading design allows for rapid inspection, replacement, or repair of internal core components while the valve remains in the pipeline, significantly reducing maintenance downtime and operational costs.
2. Reliable high-pressure sealing with integral valve body: The integral valve body structure eliminates the risk of cavity leakage. Combined with metal hard-sealed pairs (e.g., hard-faced with wear-resistant alloys), it ensures bidirectional zero-leakage sealing under high differential pressures and elevated temperatures.
3. Suitable for demanding conditions: Specifically designed for high temperatures, high pressures, and media containing particles or corrosive substances. The trunnion-mounted ball structure, paired with high-performance bearings, ensures stable operating torque and extended service life.

4. Fire-safe and safety design: Typically complies with fire safety standards such as API 607/API 6FA. In the event of soft seal failure, a secondary metal-to-metal seal is established. The stem features anti-blowout and anti-static designs.

5. Versatile and flexible operation modes: Can be equipped with various actuation options, including manual, gear, electric, or pneumatic drives, to meet diverse automation control requirements.



Q347H 上装式法兰球阀结构图

Q347H Top-Entry Flanged 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	不锈钢、碳钢 cast steel, stainless steel
2	球体 ball	不锈钢、碳钢 cast steel, stainless steel
3	密封垫 seal gasket	PTFE
4	填料 packing	PTFE
5	阀杆 Stem	不锈钢、碳钢 cast steel, stainless steel

性能规范表 Performance Specification

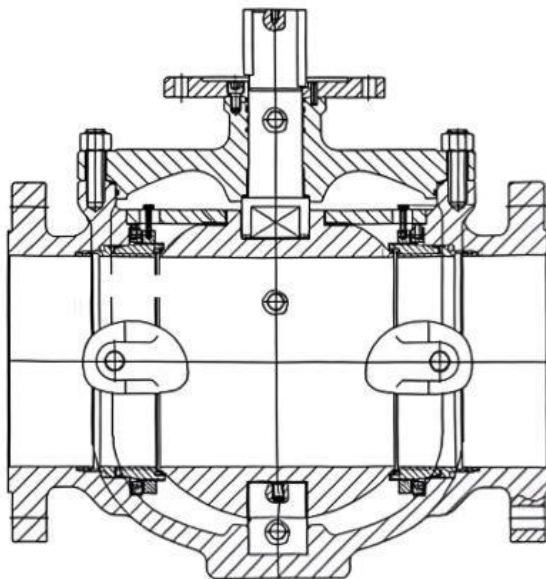
公称压力 Nominal Pressure	1.6-32	Mpa
强度试验压力 Shell Test	2.4-48	
密封试验压力 Seal Test	1.76-35.2	
适用温度 Suitable Temp.	550	℃

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.



Q347H 上装式法兰球阀外形图

Q347H Top-Entry Flanged Ball Valve View Drawing

Q347H 上装式法兰球阀外形尺寸表

Q347H Top-Entry Flanged Ball Valve Dimensions Table

压力级	主要尺寸	公称通径															
		25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500
PN1.6MPa	L	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1200	1250
	H	240	260	307	360	410	483	512	543	581	617	672	723	758	791	828	870
	Kg	9.6	16	19	28	30	41	55	78	115	215	270	385	502	876	980	1240
PN2.5MPa	L	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1200	1250
	H	260	280	320	360	430	490	525	567	604	642	695	742	781	815	864	905
	Kg	9.5	16	19	28	30	45	59	82	121	230	289	402	540	913	1120	1280
PN4.0MPa	L	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1200	1250
	H	260	280	320	360	436	492	527	607	649	701	750	750	790	832	875	910
	Kg	10	17	20	25	32	45	59	82	115	230	295	402	540	913	1124	1348

PN6.4MPa	L	160	180	200	230	290	310	350	400	480	600	730	850	980	1100	1200	1250
	H	280	320	329	365	450	509	541	663	725	781	790	806	821	858	-	-
	Kg	10	17	20	25	32	52	68	106	168	281	355	498	689	1134	-	-
150Lb	L	127	140	165	178	190	203	229	356	394	457	533	610	686	762	864	914
300Lb	L	165	178	190	216	241	283	305	381	403	502	568	648	762	838	914	991
600Lb	L	216	229	241	292	330	356	432	508	559	660	787	838	889	991	1092	1194

Q347H 上装式法兰球阀安装、使用与维护说明

安装指南

1. 安装前准备：核对阀门型号、压力等级、法兰标准及阀体材质是否符合管道设计要求。清洁阀门内腔及管道法兰密封面，确保无杂质。检查阀盖螺栓是否齐全。
2. 法兰连接与紧固：将阀门置于管道法兰之间，确保阀体流向箭头与介质流向一致。使用合适的垫片，按对角线顺序分步、均匀拧紧管道连接法兰的螺栓至规定扭矩。
3. 上装式结构注意事项：安装时无需考虑内部球体与阀座的方位。阀门应整体安装，严禁在安装管道法兰时拆卸阀盖螺栓。
4. 操作空间预留：安装时需确保阀门顶部有足够的垂直空间，以便未来进行上装式在线维护时，能够顺利拆卸阀盖及吊出内部组件。
5. 系统压力测试：阀门安装后参与管道系统压力试验。试验压力需符合设计规范，试验后检查所有法兰连接处有无泄漏。

使用操作

1. 启闭操作：通过顶部的手轮、齿轮箱或执行器进行 90 度旋转操作。操作应平稳，达到全开或全关位置时停止，避免强行过位。
2. 状态确认：通过执行器反馈信号或阀门上的机械指示器明确判断开关状态。对于关键管线，状态指示应清晰可见。
3. 常规运行：本阀门适用于全开或全关闭断，不应用于流量调节。长期处于全开状态时，建议定期进行全行程开关操作。
4. 注意事项：操作时如感觉扭矩异常增大，应立即停止。严禁在阀门承压状态下进行任何涉及拆卸阀盖的维护操作。

维护保养

1. 定期检查：定期检查所有法兰连接处有无泄漏，阀体表面有无异常。检查阀盖螺栓及外部紧固件是否紧固。

2. 在线维护（核心优势）：当需要检查或更换内部阀座、密封件或球体时，可在系统完全泄压后，仅拆卸顶部阀盖的连接螺栓，即可通过上方开口将整个阀芯组件（包括球体、阀杆、阀座）整体吊出进行检查和维护，无需将阀门从管道上拆下。
3. 内部组件维护：吊出阀芯组件后，检查球体与阀座密封面的磨损情况，清洗或更换阀座密封圈，检查阀杆及轴承的磨损。维护完成后，将组件从顶部重新装入阀体并紧固阀盖。
4. 阀杆填料维护：若阀杆在运行中出现外漏，可在泄压后，通过均匀拧紧填料压盖螺母来处理。若无效，则需在拆卸阀盖维护阀芯时一并更换填料。
5. 长期停用：阀门长期存放应处于全开或全关位置。对阀杆等外露部分采取防锈措施。重新启用前，需检查阀盖螺栓紧固度并进行压力测试。

Installation, Operation, and Maintenance Instructions for the Q347H Top-Entry Flanged Ball Valve

Installation Guide:

1. Pre-installation Preparation: Verify that the valve model, pressure rating, flange standard, and valve body material comply with pipeline design requirements. Clean the internal cavity of the valve and the sealing surfaces of the pipeline flanges to ensure no impurities are present. Check that all bonnet bolts are intact.
2. Flange Connection and Tightening: Place the valve between the pipeline flanges, ensuring the flow direction arrow on the valve body aligns with the medium flow direction. Use an appropriate gasket and tighten the pipeline connection flange bolts in a diagonal sequence, step by step and evenly, to the specified torque.
3. Notes for Top-Entry Structure: The orientation of the internal ball and seats need not be considered during installation. The valve should be installed as a whole unit. Disassembling the bonnet bolts during the installation of pipeline flanges is strictly prohibited.
4. Reserve Operating Space: During installation, ensure sufficient vertical space above the valve to facilitate future top-entry online maintenance, allowing for easy disassembly of the bonnet and removal of internal components.
5. System Pressure Testing: After installation, the valve must participate in the pipeline system pressure test. The test pressure must comply with design specifications. After testing, inspect all flange connections for leaks.

Operation Instructions:

1. Opening and Closing Operation: Perform a 90-degree rotation operation via the top-mounted handwheel, gearbox, or actuator. The operation should be smooth, stopping once the fully open or fully closed position is reached. Avoid forcing the valve beyond its limits.
2. Status Confirmation: Clearly determine the open/closed status using actuator feedback signals or the mechanical indicator on the valve. For critical pipelines, the status indication should be clearly visible.

3. Normal Operation: This valve is suitable for full open or full closed shut-off applications and should not be used for flow regulation. If the valve remains fully open for extended periods, periodic full-stroke opening and closing operations are recommended.

4. Precautions: If abnormal torque increase is felt during operation, stop immediately. Maintenance operations involving bonnet disassembly are strictly prohibited while the valve is under pressure.

Maintenance Instructions:

1. Regular Inspection: Periodically inspect all flange connections for leaks and check the valve body surface for abnormalities. Verify the tightness of bonnet bolts and external fasteners.

2. Online Maintenance (Core Advantage): When inspection or replacement of internal seats, seals, or the ball is required, fully depressurize the system, remove only the connecting bolts of the top bonnet, and hoist out the entire internal assembly (including the ball, stem, and seats) through the top opening for inspection and maintenance. The valve does not need to be removed from the pipeline.

3. Internal Component Maintenance: After hoisting out the internal assembly, inspect the wear on the sealing surfaces of the ball and seats, clean or replace seat sealing rings, and check for wear on the stem and bearings. After maintenance, reinsert the assembly into the valve body from the top and secure the bonnet.

4. Stem Packing Maintenance: If external leakage occurs at the stem during operation, address it by evenly tightening the packing gland nuts after depressurization. If this is ineffective, replace the packing when disassembling the bonnet for internal maintenance.

5. Long-Term Storage: For long-term storage, the valve should be in the fully open or fully closed position. Apply anti-rust measures to exposed parts such as the stem. Before re-commissioning, check the tightness of the bonnet bolts and perform a pressure test.

非常感谢您的阅读！

Большое спасибо за чтение!

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