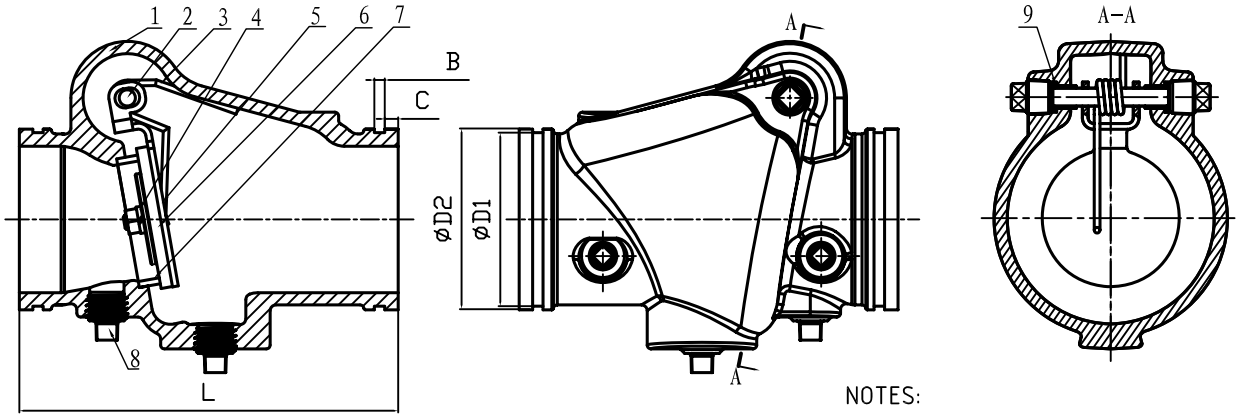
RELEASE NO.



NOTES:

1. Connection Ends:Groove to AWWA C606;
2. Working pressure:200PSI/250PSI/300PSI available upon request;
3. Temperature Range:0℃-80℃;
4. Coating:Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request.

SIZE		L (mm)	D1 (mm)	D2 (mm)	B (mm)	C (mm)
In	mm					
2"	60	171±1	$57.15^{0}_{-0.38}$	$60.3^{+0.61}_{0}$	$7.93^{+0.79}_{0}$	15.88±0.79
2.5"	73	184±1	$69.09^{0}_{-0.46}$	$73^{+0.74}_{0}$	$7.93^{+0.79}_{0}$	15.88±0.79
3"	89	197±1	$84.94^{0}_{-0.46}$	$88.9^{+0.89}_{-0.79}$	$7.93^{+0.79}_{0}$	15.88±0.79
4"	114	206±1	$110.08^{0}_{-0.51}$	$114.3^{+1.14}_{-0.79}$	$9.53^{+0.79}_{0}$	15.88±0.79
5"	141	247.65±1	$137.03^{0}_{-0.56}$	$141.3^{+1.42}_{-0.79}$	$9.53^{+0.79}_{0}$	15.88±0.79
6"	168	324±1	$163.96^{0}_{-0.56}$	$168.3^{+1.57}_{-0.79}$	$9.53^{+0.79}_{0}$	15.88±0.79
8"	219	370.84±1.5	$214.4^{0}_{-0.64}$	$219.1^{+1.57}_{-0.79}$	$11.13^{+0.79}_{0}$	19.05±0.79
10"	273	457.2±1.5	$268.28^{0}_{-0.69}$	$273^{+1.57}_{-0.79}$	$12.7^{+0.79}_{0}$	19.05±0.79
12"	324	534.9±1.5	$318.29^{0}_{-0.76}$	$323.9^{+1.57}_{-0.79}$	$12.7^{+0.79}_{0}$	19.05±0.79

Part No.	Part&size	MATERIAL
9	Bushing	ASTM B62 C83600
8	Plug	Malleable Iron Galvanized
7	Seat	ASTM B62 C83600
6	Seal Ring	EPDM
5	Disc	Ductile Iron 65-45-12or Stainless Steel 304
4	Spring Washer	Stainless Steel 304
3	Spring	Stainless Steel 304
2	Hinge Pin	Stainless Steel 420
1	Valve Body	Ductile Iron 65-45-12

DATE	REVISION	BY	MATERIAL:	DRAWN BY Wu Xiuting	DRAWING# 901H84X-46-0-E	TITLE FIG# H84X Grooved Resilient Swing Check Valve	
				CHECKED BY Zhao Xian	APPROVED BY Wang Shixin		
			FINISH:	SCALE	ISSUE DATE 15-11-28	JINAN MEIDE CASTING CO.,LTD.	REV.0

CERTIFICATE OF COMPLIANCE

Certificate Number	20140819-EX16203
Report Reference	EX16203-20131015
Issue Date	2014-AUGUST-19
Issued to:	JINAN MEIDE CASTING CO LTD 3 NANMEN RD PINGYIN JINAN SHANDONG 250400 CHINA
This is to certify that representative samples of	CHECK VALVES See Addendum
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 312, Standard for Check Valves for Fire Protection Service ULC/ORD-C312, Standard for Check Valves for Fire Protection Service
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Listing Mark for the US and Canada should be considered as being covered by UL's Listing and Follow-Up Service meeting the appropriate requirements for US and Canada.
The UL Listing Mark for the US and Canada generally includes: the UL in a circle symbol with “C” and “US” identifiers: c UL us the word “LISTED”; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product.

William R. Carney, Director, North American Certification Programs

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20140819-EX16203
Report Reference	EX16203-20131015
Issue Date	2014-AUGUST-19

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

H44X2-300, H44X2-16, H44X2-200, H84X-300, H84X-250, H84X-200, H84X-PN16, H84X-PN10

Note: All models have same construction, except H44X2-300/200 and H44X2-16 have different flange type. The check valves are intended for installation in both the horizontal and vertical positions. Model H84X series have same construction except rated pressure.

William R. Carney, Director, North American Certification Programs

UL LLC

Certificate of Compliance

This certificate is issued for the following:

Swing Check Valves

Models H44X-300, H44X-200 and H44X-PN16
Sizes 2, 2-1/2, 3, 4, 6, 8, 10 and 12 inch NPS

Prepared for:

Jinan Meide Casting Co Ltd
No 3 Nanmen Rd
Pingyin Jinan, Shandong 250400
China

Manufactured at:

Jinan Meide Casting Co Ltd
No 3 Nanmen Rd
Pingyin Jinan, Shandong 250400
China

FM Approvals Class: 1210

Approval Identification: 0003047838

Approval Granted: July 23, 2013

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

Richard B. Dunne
Group Manager - Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062

Member of the FM Global Group

Installation & Maintenance Instruction for Flanged Resilient Swing Check Valve

Issued 27th, Oct., 2014

Jinan Meide Casting Co., Ltd.

地址：中国济南市平阴县城南门路3号 250400 电话(Tel): 008653187879384
ADDRESS:No. 3 Nanmen Road, Pingyin, Jinan, China 250400 传真(Fax): 008653187879387

I. General Introduction

Thank you for choosing our check valve products. Check valve as one of the pressure equipment may lead to huge damage because of excessive pressure and leakage. The instruction should be read before using the valves for customers.

II. Property Specifications

Design Standard	ANSI/AWWA C508-09
Face to Face	ANSI/AWWA C508-09（except 10”）
Valves Test	API598
Connection Ends	ASME B16.1 Class125
Rated Working Pressure	200PSI/250PSI/300PSI
Working Temperature	0～80℃
Coating	Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550
Certification	UL/FM

III. Structure Design & Working Principle

For the structure of flanged resilient swing check valve, pls see Figure 1. For the dimensions, pls see the Table 1.

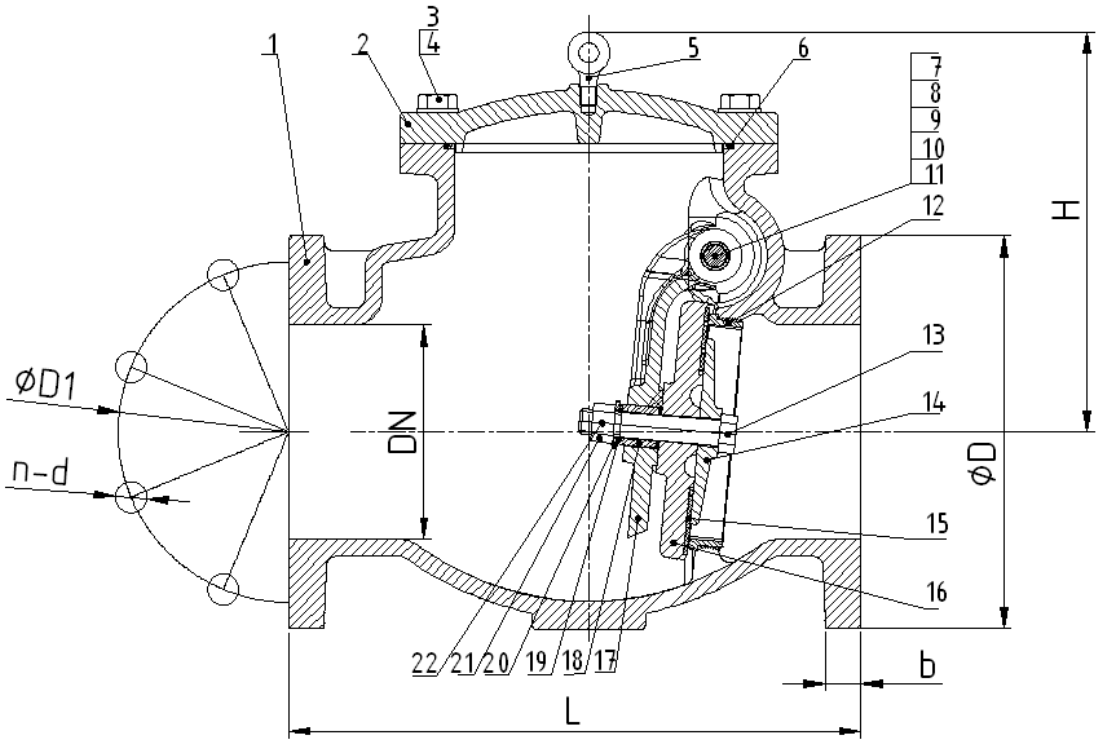


Figure 1-- Structure

INCH	MM	L（mm)	D（mm)	D1（mm)	b（mm)	H（mm)	n-ϕd
2"	50	203	152	120.5	16	133	4-Φ19.1
2-1/2"	65	254	178	139.5	17.5	150	4-Φ19.1
3"	80	278	191	152.5	19	243	4-Φ19.1
4"	100	330	229	190.5	24	284	8-Φ19.1
6"	150	406	279	241.5	25.5	290	8-Φ22.2
8"	200	495	343	298.5	28.5	330	8-Φ22.2
10"	250	622	406	362	30.5	350	12-Φ25.4
12"	300	660	483	432	32	376	12-Φ25.4

Table 1—Dimensions

IV. Material Construction of Major Components:

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Bonnet	ASTM A536, 65-45-12	
3	Eye Bolt	Carton Steel Zinc Planted	
4	O-Ring	NBR	EPDM
5	Hinge Pin	AISI 304	
6	Hinge Bushing	Brass ASTM B16 C36000/Hpb63-3	
7	Seat Ring	Bronze ASTM B62 C86300/ZQSin5-5-5(Presses Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
8	Disc Seat Bolt	AISI 304	
9	Retainer Washer	Bronze ASTM B62 C86300/ZQSin5-5-5	
10	Disc Sealing Ring	EPDM	AISI 304, AISI 316, Bronze ASTM B62
11	Disc	ASTM A536, 65-45-12	
12	Clapper Arm	ASTM A536, 65-45-12	
13	Stud Bushing	Brass ASTM B16 C36000/Hpb63-3	
14	O-Ring	NBR	EPDM
15	Nut	AISI 304	AISI 316

V. Working principle:

Check valves serve to prevent the backflow of medium in the piping system for protection of important equipment, widely used in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, for protection as well as chemical and energy industry.

VI. **Tansportation**

a) The valves should not be damaged during the transit. Before transportation, rope, lift and transportation should be ready. Check the package of valves. Valves should be repacked, if there are damages on the package.
b) Valves should be lifted lightly with ropes tied hardly in the rings.
c) Valves should not dragged on the ground or moved with the faces on ground to keep the surface, metal plates and sealing surface from damaging.
d) Valves should not be unpacked if they are to be installed. Valves should be placed in a safe place, and make good waterproof, dustproof work.

VII. **Storage**

a) The valve is to be stored in dry cool conditions in the warehouses with good ventilation.
b) The waterway and ends of the valves are to keep sealed.

VIII. **Installation**

a) Valve should be carefully checked whether the valve symbol meet the use requirement before installation and whether the flow direction of medium consistent with flow arrow symbol marked on valve body
b) If there is a fluctuating source in the pipeline, valve should be installed far away from it.
c) Before installation waterway and sealing surface should be checked. If there is any dirt, clean that with soft cloth.
d) If the connection ends is flanged, end, stud, nuts and washers should be chosen appropriately according to the using temperature, working pressure, working medium. Tighten screw and nuts and keep them balanced. The specifications of the stud and nut should comply with the requirements of flange standard ASME B16.1 CLASS125.

IX. **Maintenance**

a) Should not a person beat, stand on the working valve.
b) Finish using, valves should be checked regularly:
    1) Check valve seat sealing and the abrasion of the disc seats;
    2) Check the body corrosion.
c) If the above situation is discovered, valves should be repaired or replaced in time. We suggest maintain the valves every three months or in accordance with local rules and regulations.
d) After maintenance, valves should be tested for shell strength and sealing according to standard API598
e) O-rings, bolts, nuts and gaskets of same size and material same as the original ones should

be used in maintenance. These parts can be ordered as spares for replacement.

f) Should not open the valve cover or take replacement of bolts and nuts when valve is under pressure.

g) After parts replacement, press test should be made. After testing, the valves can be used.

h) The maintenance can be done by users, but after repair tests shall be carried out according to standard. Then the valves are qualified to use.

i) Valve internal parts should be replaced rather than repaired in maintenance. Should the parts supplied by manufacturers are be used, if damage occurs due to the use of other parts not supplied by manufactures and the manufacturer do not assume responsibility.

j) Parts under pressure are not recommended to be repaired rather than replaced timely when safety defects are found after a long time usage.

k) Welding the working valves is not allowed.

X. Common Problems and Proposed Solutions

Possible Problems	Possible Causes	Proposed Solutions
Leakage through the sealing surface	The seal face with sundries	Clear away the sundries
	Sealing surface damage	Change the wedge
	Seal ring damage	Seal ring damage
Valves blocked	Clapper arm crooked	Stop the medium, remove the valve and repair or replace the parts
	Joint wearing out	
	Arm distorted or broken	
Damage of valve body and bonnet	The water hammer broken valve	In the early fatigue defects, valve used beyond life expectancy should be replaced
	Fatigue damage	
	Frost crack	water medium should be ruled out in the winter when the valves are not used
Leakage through the jointing of valve body and bonnet	Bolts and nuts are not fully or evenly tightened	Tighten the bolts properly
	eal ring damage	Change the seal ring

XI. Quality assurance

a) The valve quality is guaranteed for 18 months since valves are shipped out of factory. Manufacturer is responsible for the material defects and quality issue happens in normal operation and using conditions and not for the improper installation, maintenance, and modification.

b) When quality problems are found, should inform manufacturers, manufacturers maintain the rights of investigating these issues.

c) What should the manufacturers ensure are limited to the following conditions:
- material repair costs
- replacing parts and material cost

- to compensate users purchasing cost

d) Manufacturer is not liable of the damages caused by unexpected natural disasters such as earthquake, typhoon, etc. beyond the valve itself defects.

e) Beyond the limits of other guarantee, agreed by the user and the manufacturer.

XII. **Service**

a) If stipulated in the contract, the factory can provide on-site installation and debugging.

b) Quality tracking should be provided by the manufacturer and other services should also be offered according to customers' requirements.