Soft Sealing Gate Valve (RESILIENT-SEATED GATE VALVE AWWA C509)



YIHWAN High Grade Soft Water Stop Valve for Controlling Fluid(HQ-5)

Development Motives and Characteristics

(Eccentricity Relief Half Guide)

• Development Motives

Basic requirements for a valve need to interrupt fluid and to make a current to be more effluent. This is a valve developed for meeting to economical efficiency, easy handling and convenient maintenance & repairing.

• Characteristics (No.0299719, No.029472)

- 1. We reduce the weight of valve to a minimum (about 15%) considering to economical efficiency by employing the method of half guide with the eccentricity uneven-type.
- 2. By designing the driving force equilibrium supporting stand with the method of eccentricity, our valve displays constant index capacity.
- 3. It is convenient to post management owing to the simplification of components.
- 4. This valve is an environment friendly product.



Specifications

• Inner Structure





O Materials of HQ-S

No.	Names of part	Material
1	Guide groove	Spherical carbon iron bar(GCD450)
2	Groove tank	GCD450 of KSD4302
3	Rubber disk	GCD450, Rubber for water serviced system(NBR or EPDM)
4	Valve and nut	Bronze BC Kind 6
5	Cover	Spherical carbon cast iron(GCD450)
6	Teflon	Teflon
7	Packing box	BC Kind 6
8	Сар	Spherical carbon cast iron(GCD450)
9	Сар	Stainless stell bar(STS304)
10	Packing	NBR
11	Valve stand	Stainless stell bar(STS304)
12	Hexagonal bolt	Stainless stell bar(STS304)
13	Gasket	NBR

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HQ-S Standerd

(Eccentricity Relief Half Guide)





Unit:mm

Code		Size		Flange dimension								Thickness Valve				
	Diameter d	between surfaces	Outer	Outer diameter	Bolt hole			Name Thickr		kness	IESS		ional iency	Allowable error in	Height (H)	Weight
Name		L	D	of Gasket g	Circular diameter	No.	Hole diameter h	ofbolt	t1	f	t2	А	В	rotational frequency		
40	46	118	-	-	-	-	-	-	-	-	7	15	15		580	7.5±5%
50	57	118	-	-	-	-	-	-	-	-	7	15	15		580	7.5±5%
65	65	192	180	120	140	4	19	M16	18	2	8	11	6.5		355	21±5%
80	80	240	200	133	160	4	19	M16	18	2	8	14	8		360	22±5%
100	100	250	220	153	180	8	19	M16	18	2	9	18	10		456	27±5%
125	125	260	250	183	210	8	23	M20	0	2	9	22	13		526	40±5%
150	150	280	285	209	240	8	23	M20	22	2	10	19	15	12	504	48±5%
200	200	300	340	264	295	8	23	M20	22	2	10	25	20	C+	588	79±5%
250	250	380	395	319	350	12	23	M20	24	2	12	25	21		712	130±5%
300	300	400	445	367	400	12	23	M20	24	3	12	30	25		814	170±5%
350	350	430	505	427	460	16	23	M20	26	3	14	35	28		951	250±5%
400	400	470	565	477	515	16	27	M24	28	3	16	34	28		1038	165±5%
450	450	500	615	527	565	20	27	M24	30	3	17	39	32		1140	420±5%
500	500	530	670	582	620	20	27	M24	30	3	18	43	36		1256	490±5%

* Rotational frequency B may be produced according to the request of consumer.

HQ-S Characteristics

• Characteristics(Soft sluice Value attached Quick Air Valve, Patent No.0510105)

- 1. It is possible to install without any restriction of special angle.
- 2. It shows superior deflation of air owing to the rotation of floating ball.
- 3. There is no clog due to an alien substance though long operation.
- 4. There is a difference of five times(min.) or sixteen times(max.)in the deflation amount of air. (small size but high degree of efficiency in the deflation of air than the existing air valves)
- 5. This is a quick air deflation valve with low cost but high degree of efficiency.







[Soft sluice Value attached Quick Air Valve]



Characteristics of Cap Adjustment Type

• Characteristics

- 1. This is designed based on the freezing depth.
- 2. The Adjustment type is able to adjust the heigh minutely besed on the freezing depth.
- 3. After installing this valve, it is easy to operate the open or close of fluid route.
- * The height is able to be changed as the request of customer.





[Adjustment Type]

Nominal diameter	Size between surfaces	Flange dimension										Height		
d	L	ØD	Øg	ØC	t1	f	t2	n	Øh	М	frequency	H0	H1 Adjustment Type	H2
80	240	200	133	160	18	2	6	4	19	M16	13	160	900	1340
100	250	220	153	180	18	2	6	8	19	M16	17	205	900	1300
150	280	285	209	240	22	2	7	8	23	M20	19	270	900	1210
200	300	340	264	295	22	2	8	8	23	M20	25	320	900	1160
250	380	395	319	350	24	2	9	12	23	M20	25	385	900	1070
300	400	445	367	400	24	3	9	12	23	M20	30	405	900	1015
350	430	505	427	460	26	3	12	16	23	M20	35	550	900	920
400	470	565	477	515	27	3	12	16	28	M24	34	660	1000	1070
500	530	670	582	620	29	4	14	20	28	M24	42	710	1110	1135

* Remarks : H1 has the standard of 1200mm in the freeing depth.

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Specifications for procurement

(Eccentricity Relief Half Guide)

• Major materials

The major materials shall conform to the approve drawings of high grade soft water stop valves dor controlling fluid (HQ-S)(Patent No.0299719) and the specifications in Page B(Table 1-1)

Out shape

Outer shape before painted

The surface of a mould shall be so smooth that it will keep from any kind of disadvantages in use such as crack, groove, browed groove, and the like.

Outer shape after painted

The surface of a valve shall be free from any kind of faults such as mixture of foreign materials, mistake of painting, pin hall, and the like.

O Painting

The cast iron parts of a valve shall be painted in all and the colors shall be grey or one demanded by a customer. Painting materials, painting parts, and painting method shall conform to the Annex of EM0368(Method for spray painting epoxy resin to a soft valve of water service).

• Inspection and execution

Strength test

A valve shall be free from any damage in the stem or the upper part of the stem cap under a condition that a different pressure will be applied upon a full closure of the disk that will be impossible to operate a torque in a maximum functional test stated in Table 1-2, and the damaged status shall be confirmed though the following functional test.

Functional test

Manipulate in to go and return between the full closure by deploying the valve after a strength test when a manipulation torque of the whole distance shall not exceed a torque of the maximum functional test.



		5				
Nominal diameter	Torque in the minimum strenghth test	Torque in the maximum functional teat				
78	22.9	7.6				
100	30.8	10.2				
150	45.9	15.3				
200	61.2	20.4				
250	76.5	25.6				
300	91.8	30.6				
350	99.4	33.1				
400	107.1	35.7				
500	160.6	53.5				

Unit:kaf · m

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