



350-11, Habinnam-ro, Habin-myeon, Dalseong-gun, Daegu  
Tel. 053-585-6992/4 Fax. 053-585-6993  
E-mail. [dhv@dh-valve.co.kr](mailto:dhv@dh-valve.co.kr)  
Website. [www.dh-valve.co.kr](http://www.dh-valve.co.kr)





Best Valve  
Solution Partner  
**DONGHAE CO., LTD.**

[www.dh-valve.co.kr](http://www.dh-valve.co.kr)

**Soft Seat Slim Gate Valve (For Waterworks & General Industries)**



**dh**

Donghae Co., Ltd.



A Professional Knife Gate Valve  
 Manufacturer **DONGHAE CO., LTD.**

We get closer to our valuable clients with high quality  
 and advanced technology.

# History

## 2020.

- 03. CEO awarded with the Commendation of the Environment Minister ('Proud Water Supply & Sewerage Entrepreneur')
- 04. Soft seat slim gate valves broadly distributed to water-supply & sewerage and environmental facilities and multipurpose water supply facilities across the country Exported to USA, Japan, Vietnam, Singapore, etc.
- 12. Designated by ministry of environment as an BEST Water Industry Product

## 2018.

- 06. Obtained Sluice Valve Performance Certification (Ministry of SMEs and Startups)  
 Sluice valve rated as 'GOOD' in Korea South-East Power's Empirical Project

## 2019.

- 05. Chosen as a pilot product for the new soft seat gate valve for water supply (Ministry of SMEs and Startups)

## 2003.

- 02. DONGHAE VALVE established
- 05. Company expanded and relocated (537, Seojae-ri, Dasa-eup, Dalseong-gun, Daegu)

## 2005.

- 04. Registered as the vendor of Doosan Heavy Industries & Construction Utility Model registered with 2- and 3-way ball V/V metal seats
- 05. Obtained ISO 9001 (DAS: DKQ-5902)

## 2007.

- 01. The seat structure for the knife gate valve improved and a patent certified

## 2008.

- 05. Obtained API Q1 Certification

We have produced and distributed knife gate valves since 2003 and made continued investments and efforts for technology development and quality improvement to meet market needs. As a result, we have developed knife gate valves into soft seat slim gate valve, which are applicable to water, slurry, oil and gas lines. It is the first gate valve with slim and light structure in the world.

They can substitute current gate valves, and a demand for them has been on the rise due to satisfying performances.

Specifically, they can be applied up to ASME 150LB/300LB. No leakage is found even at 40kgf/cm<sup>2</sup>, and no foreign matters are accumulated on the bottom of valve bore, ensuring smooth valve operation. As flow-control, flow-interception valves in fire-safety design, they are applicable to important pipe lines.

In both domestic and overseas markets, we are responding to our clients' diverse needs more closely through the development and distribution of multiple special-purpose valves as well as knife gate valves including soft seat slim gate valve for water works and other industries.

We promise that we would keep making our best efforts and grow into a solid valve partner of our clients.

## 2016.

- 01. Obtained Sanitation & Safety Certificate (Korea Certification (KC) – Water Supply Sluice Valve, Korea Water and Wastewater Works Association)
- 08. Obtained Certificate of Competency (COC) in five power companies in the Republic of Korea Named 'Preferred Purchase Recommendation Program for Good Invention' (Korea Invention Promotion Association)

## 2017.

- 02. Obtained Sluice Valve Conformity Certification (Korea Water and Wastewater Works Association)

## 2014.

- 04. Obtained INNO-BIZ Registered as the vendor of Mitsubishi Hitachi Power System Korea LTD. (MHPS Korea)

## 2015.

- 10. Obtained Certificate of Environmental Management System (Korea Productivity Center Quality Assurance) Acquired Certificate of Occupational Health & Safety management System (Korea Productivity Center Quality Assurance) Earned a patent for the soft seat gate valve

## 2009.

- 06. Registered as the vendor of Samsung Heavy Industries

## 2011.

- 08. Registered as the vendor of Hyundai Heavy Industries (Shipbuilding)
- 12. Registered as the vendor of Hyundai Heavy Industries (Shipbuilding)

## 2012.

- 02. New factory opened & relocated (350-11, Habinnam-ro, Habin-myeon, Dalseong-gun, Daegu)
- 12. Firm renamed to DONGHAE CO., LTD.

## 2013.

- 08. ISO 9001 (GK-1019-QC) Earned a certificate of European directives compliance (K5882/M13)



# Soft Seat Slim Gate Valve

(For Waterworks & General Industries)



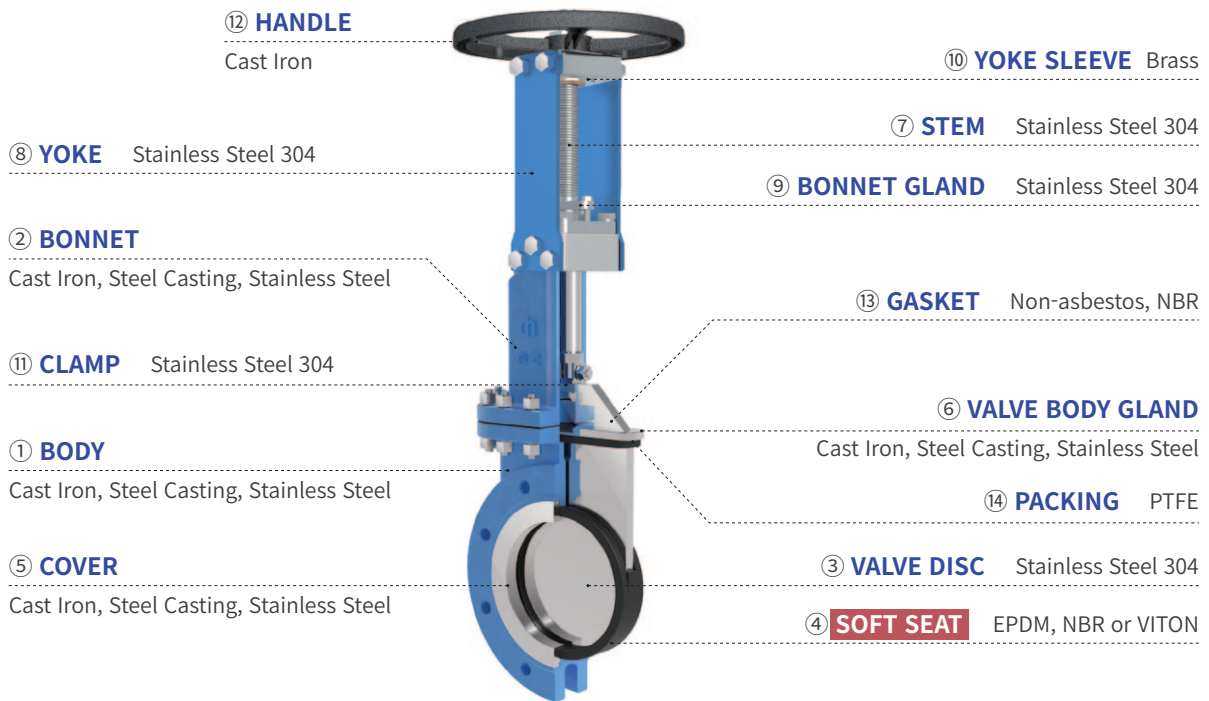
## Overview

For the improvement of valve sealing performance and reliability the patented round **soft seat** (rubber cushion seat) is inserted into the area where the valve disc moves up and down. If the valve is shut off, the disc drops and is adhered to the soft seat and then valve metal seat. Such double sealing blocks fluid flow without leakage.

It can be installed to the water/oil/gas/slurry-mixed fluid line where some chronic problems resulting from foreign matters accumulated under the valve and seat leakage occur to take care of them.

This flow-control and shut-off valve in fire-safety design is applicable to important lines.

## Structure



## Specifications

- AWWA Standards (AWWA C520 Knife Gate Valve)
- Soft Seal Sluice Valve Standard (SPS-KWWA B102-0709)
- Stainless Steel Sluice Valve Standard (SPS-KVIC 1103-1093)
- Water Supply Sluice Valve Standard (KS B 2332)
- High-pressure Knife Gate Valve Standard (MSS SP-135)

## Applications



Water Supply



Sewerage



Oil



Gas



Paper-making



Food Processing

# Features and Advantages

www.dh-valve.co.kr



## Great substitution for conventional fluid shut-off valves

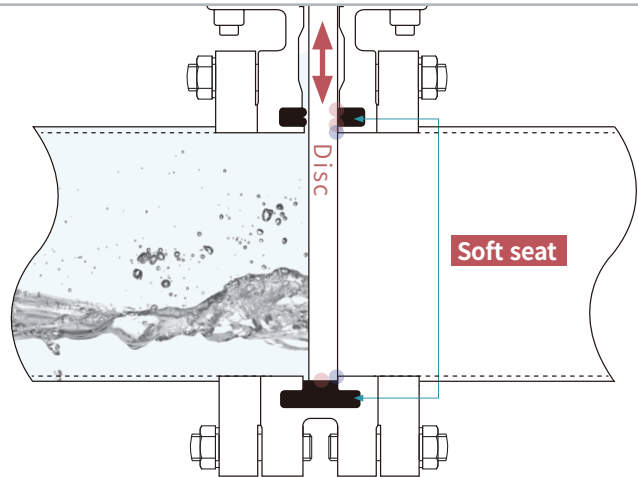
- Applicable to water, oil, gas and slurry-mixed lines

## Flow-control,

## Shut-off Valve

## No Leakage

- Double shut-off structure
  - Primary shut-off **Soft seat** + ● Secondary shut-off **Metal seat**
- Able to shut off even under high pressure ; bi-directional fluid control
- Applicable to important lines in fire-safety design

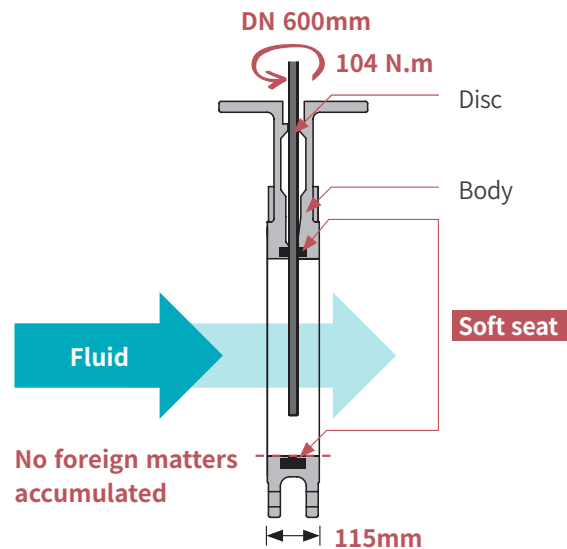


## No Accumulation of Foreign Matters

- Total enclosure enabled all the time
- Significantly lowering the valve failure rate
- Smooth valve operation

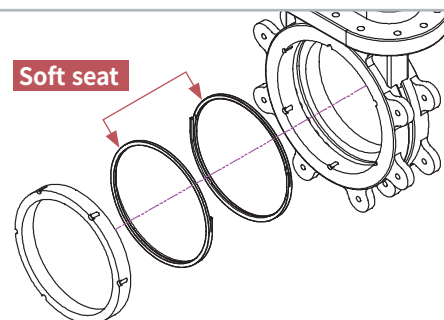
## Easy Installation

- A slim face-to-face dimension with plate disc ; installable in a slim space (valve bore : 600mm, face-to-face dimension: 115mm)



## Cost Reduction

- Replacement costs saved in easily installable & removable soft seat design
- Acquisition costs reduced in slim and light design
- Plate disc applied; low driving force used with O-shaped soft seat (valve bore: 600mm, 104N.m)





# Soft Seat Slim Gate Valve

(For Waterworks & General Industries)



## Test Pres.

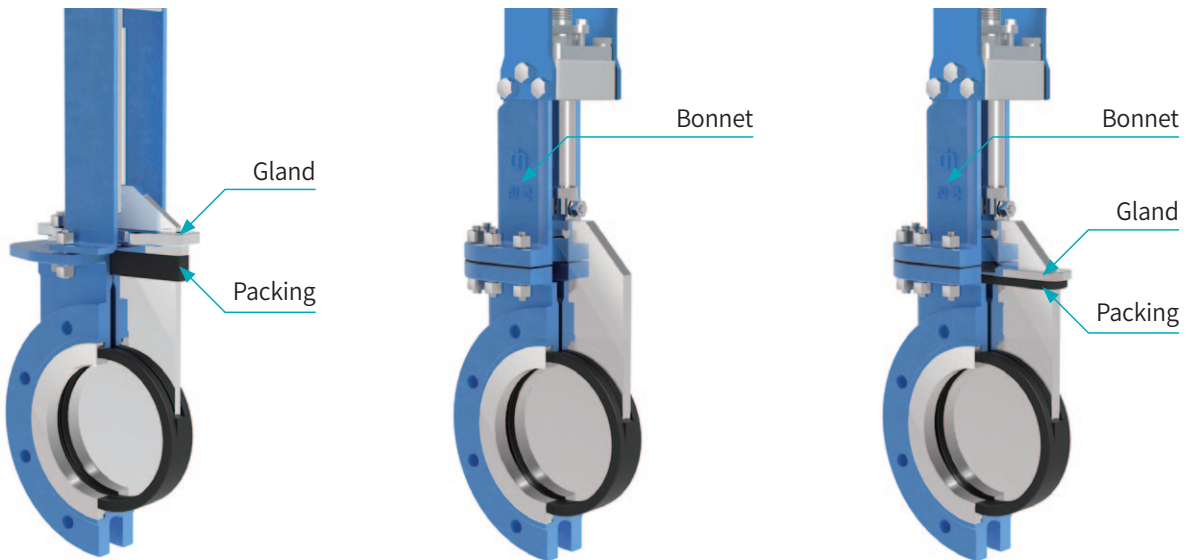
### Shell Test Pres. (kgf/cm<sup>2</sup>) \_ Hydro Test

Valve Size (mm)	10K	20K	150LB	300LB
50 ~ 600	23	29	ASME 16.34 (MSS SP-81,135)	ASME 16.34 (MSS SP-135)
700 ~	14	N/A		N/A

### Seat Test Pres. (kgf/cm<sup>2</sup>) \_ Hydro Test

Valve Size (mm)	10K	20K	150LB	300LB
50 ~ 600	10	22	ASME 16.34 (MSS SP-81,135)	ASME 16.34 (MSS SP-135)
700 ~	10	N/A		N/A

## Valve Structure



### Bonnetless type

- Used in fluid with large particles and viscosity
- Used when switching frequency is low
- Not applicable to water or oil lines

### Bonnet type












- Used for pure liquid or gas (e.g., water, oil, air, etc.)
- Used when switching frequency is high; applicable to important lines in which out-leakage is not permitted

### Bonnet + Packing + Gland In Type

- Applicable to all fluid lines
- Used when switching frequency is high; applicable to important lines in which leakage is not permitted

# Models

Valve Color | ● Water Supply ● Sewerage

Non-rising Stem Type	Rising Stem Type
<p>Manually Actuated (Cap)</p> 	<p>Manually Actuated</p> 
<p>Manually Actuated (Gear)</p> 	<p>Manually Actuated (Gear)</p> 
<p>Electrically Actuated</p> 	<p>Electrically Actuated</p> 
	<p>Pneumatically Actuated</p> 
<p>If requested by a client, a medium F to F type can be provided.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="375 1601 486 1881">  <p><b>S1</b> Slim F to F</p> </div> <div data-bbox="550 1601 694 1881">  <p><b>S2</b> Medium F to F</p> </div> </div>	<p>Double-floor Type</p> 



# dh Non-rising Stem Type

Valve Color | ● Water Supply ● Sewerage

## Manually Actuated (Cap)

### 10K - Slim F to F (S1)



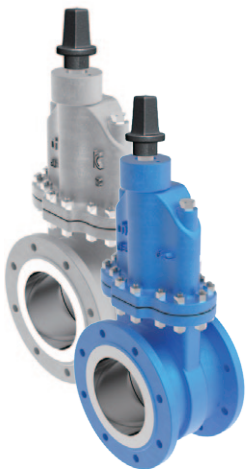
Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	13	20	30	40	55	70	98	115	180	225	285	365	455	500	563	580
Height (mm)		290	330	400	450	500	539	630	820	905	1050	1150	1250	1323	1600	1750	1900
No. of Rotation		12	13	14	15	18	24	25	30	34	35	40	40	47	56	63	73
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	23	30	40	50	70	85	115	190	215	253	330	415	530	590	670	765
Height (mm)		290	330	400	450	500	539	630	820	905	1050	1150	1250	1323	1600	1750	1900
No. of Rotation		12	13	14	15	18	24	25	30	34	35	40	40	47	56	63	73
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

### 10K - Medium F to F (S2)



Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	36	42	59	75	91	108	132	208	262	327	395	478	557	654	713	830
Height (mm)		290	330	400	450	500	539	630	820	905	1050	1150	1250	1323	1600	1750	1900
No. of Rotation		12	13	14	15	18	24	25	30	34	35	40	40	47	56	63	73
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	46	60	80	100	140	170	230	304	344	405	528	664	848	944	1070	1224
Height (mm)		290	330	400	450	500	539	630	820	905	1050	1150	1250	1323	1600	1750	1900
No. of Rotation		12	13	14	15	18	24	25	30	34	35	40	40	47	56	63	73
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

**dh** The stem moving up/down the valve disc is inserted into the bonnet. Even if the valve is open, the stem does not rise. It is able to check if the valve is open or closed with the no. of rotation.

**dh** Good for sludge-free fluids such as pure water, oil and gas in gland packing-less design

## Electrically Actuated



**Slim F to F (S1)**

### 10K - Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	43	50	60	70	85	100	128	145	220	265	335	415	505	570	633	650
Height (mm)		456	550	605	666	770	769	992	1310	1413	1589	1674	1794	2017	2185	2288	2424
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	53	60	70	80	100	115	145	220	255	293	380	456	580	660	740	835
Height (mm)		456	550	605	666	770	769	992	1310	1413	1589	1674	1794	2017	2185	2288	2424
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403



**Medium F to F (S2)**

### 10K - Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	56	62	80	95	120	128	153	238	292	357	425	508	587	684	740	870
Height (mm)		456	550	605	666	770	769	992	1310	1413	1589	1674	1794	2017	2185	2288	2424
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	60	75	95	115	155	185	245	334	374	435	558	694	878	974	1100	1254
Height (mm)		456	550	605	666	770	769	992	1310	1413	1589	1674	1794	2017	2185	2288	2424
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

# dh Rising Stem Type

Valve Color | ● Water Supply ● Sewerage

## Manually Actuated



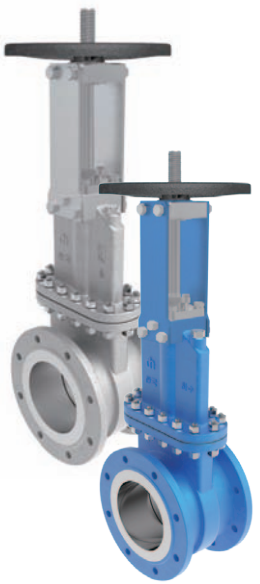
**Slim F to F (S1)**

### 10K - Slim F to F (S1)

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	16	24	36	45	62	79	106	167	196	233	302	385	476	521	583	612
Height (mm)		498	602	704	810	915	1121	1355	1689	1739	1995	2209	2393	2936	3244	3404	3561
Handle (W)		Ø200	Ø200	Ø200	Ø280	Ø280	Ø280	Ø345	Ø400	Ø400	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	26	34	46	60	82	100	131	200	231	272	352	445	560	621	700	812
Height (mm)		498	602	704	810	915	1121	1355	1689	1739	1995	2209	2393	2936	3244	3404	3561
Handle (W)		Ø200	Ø200	Ø200	Ø280	Ø280	Ø345	Ø345	Ø400	Ø400	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403



**Medium F to F (S2)**

### 10K - Medium F to F (S2)

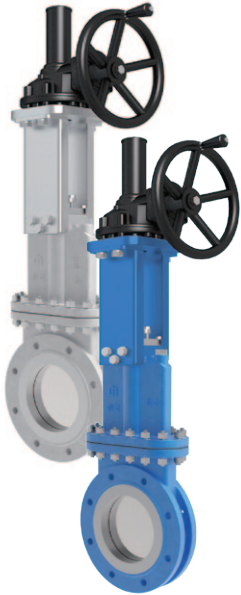
Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	36	42	59	75	91	108	132	208	262	327	395	478	557	654	710	830
Height (mm)		456	550	605	666	770	769	992	1310	1413	1589	1674	1794	2017	2185	2288	2424
Handle (W)		Ø200	Ø200	Ø200	Ø280	Ø280	Ø280	Ø345	Ø400	Ø400	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	40	52	68	85	102	135	203	250	297	350	430	512	615	695	750	860
Height (mm)		498	602	704	810	915	1121	1355	1689	1739	1995	2209	2393	2936	3244	3404	3561
Handle (W)		Ø200	Ø200	Ø200	Ø280	Ø280	Ø345	Ø345	Ø400	Ø400	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

**dh** The stem moving up/down the valve disc is protruded outside the bonnet. If the valve is open, the stem rises. Therefore, it is able to check if the valve is open or closed through the stem status.

## Manually Actuated (Gear)



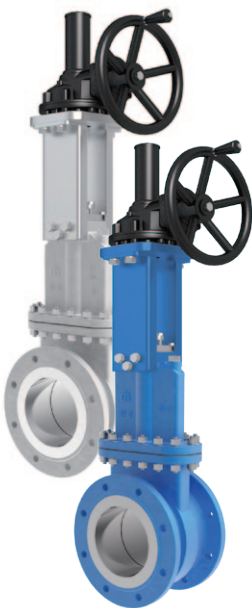
**Slim F to F (S1)**

### 10K - Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	28	36	48	59	79	99	136	199	224	273	357	440	531	587	642	677
Height (mm)		575	689	817	892	1056	1225	1419	1650	1824	2130	2178	2447	2755	3105	3280	3543
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	38	45	62	79	95	113	138	221	273	342	410	495	590	669	717	747
Height (mm)		575	689	817	892	1056	1225	1419	1650	1824	2130	2178	2447	2755	3105	3280	3543
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403



**Medium F to F (S2)**

### 10K - Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	38	56	66	79	97	117	160	227	259	305	390	468	574	627	698	750
Height (mm)		575	689	817	892	1056	1225	1419	1650	1824	2130	2178	2447	2755	3105	3280	3543
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	
Category	(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)	
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	53	67	87	107	147	177	237	319	359	420	543	679	863	959	1085	1239
Height (mm)		575	689	817	892	1056	1225	1419	1650	1824	2130	2178	2447	2755	3105	3280	3543
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

# dh Rising Stem Type

Valve Color | ● Water Supply ● Sewerage

## Pneumatically Actuated

### 10K - Slim F to F (S1)



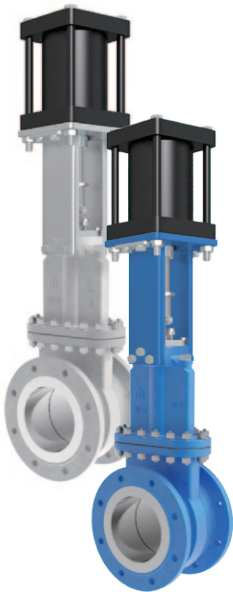
**Slim F to F (S1)**

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	38	46	56	69	89	109	146	209	240	288	370	480	570	630	697	730
Height (mm)		568	662	807	885	1018	1200	1487	1903	2018	2309	2629	2799	3349	3804	3985	4303
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	41	49	66	84	98	123	149	240	283	351	416	502	596	678	725	765
Height (mm)		568	662	807	885	1018	1200	1487	1903	2018	2309	2629	2799	3349	3804	3985	4303
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

### 10K - Medium F to F (S2)



**Medium F to F (S2)**

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	48	56	70	89	100	129	171	229	265	318	410	430	620	700	797	820
Height (mm)		568	662	807	885	1018	1200	1487	1903	2018	2309	2629	2799	3349	3804	3985	4303
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

Category \ Size	2" (50A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)	10" (250A)	12" (300A)	14" (350A)	16" (400A)	18" (450A)	20" (500A)	24" (600A)	28" (700A)	32" (800A)	36" (900A)	
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	55	73	90	120	160	190	255	331	380	445	576	730	913	1011	1155	1310
Height (mm)		568	662	807	885	1018	1200	1487	1903	2018	2309	2629	2799	3349	3804	3985	4303
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

**dh** Two types are available: 'Bonnet Type' which is advantageous for fluids not having sludge such as pure water, oil and gas without gland packing; 'Bonnet + Packing + Gland In Type' which is even good for fluids having sludge with gland packing

## Electrically Actuated

### 10K - Slim F to F (S1)

Category	Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"
		(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)
F to F	S1 (mm)	51	51	51	57	57/70	70	70	76	76	89	89	114	114	181	206	226
Weight	S1 (Kg)	48	56	68	79	99	119	156	219	250	298	382	465	556	612	667	702
Height (mm)		608	712	847	925	1061	1285	1437	1854	1968	2238	2473	2703	3259	3714	3896	4215
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Slim F to F (S1)

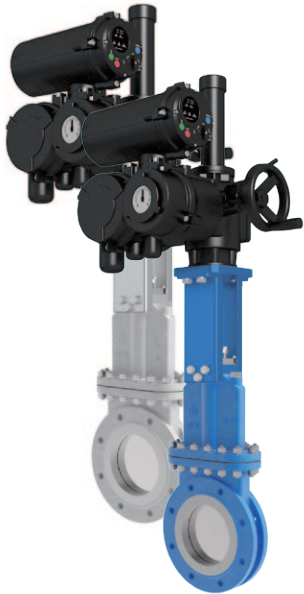
Category	Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"
		(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)
F to F	S1 (mm)	70	70	70	80	80	89	136.6	136.6	140	140	156	189	216	254	267	304
Weight	S1 (Kg)	45	54	72	89	103	128	156	244	289	356	426	511	603	683	738	770
Height (mm)		608	712	847	925	1061	1285	1437	1854	1968	2238	2473	2703	3259	3714	3896	4215
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403

### 10K - Medium F to F (S2)

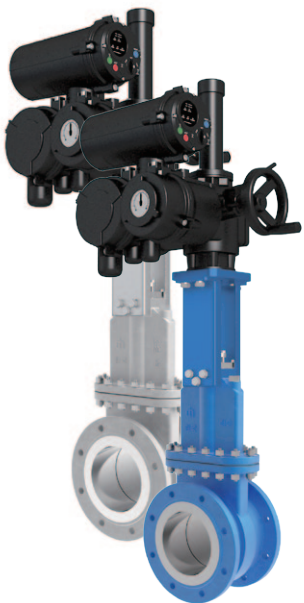
Category	Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"
		(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)
F to F	S2 (mm)	134	140	140	154	164	164	180	180	198	232	240	252	286	324	356	356
Weight	S2 (Kg)	58	66	78	95	114	139	176	239	270	320	405	495	596	670	740	790
Height (mm)		608	712	847	925	1061	1285	1437	1854	1968	2238	2473	2703	3259	3714	3896	4215
Torque (N.m)		26	26	33	36.4	46.8	46.8	52	58.5	65	71.3	78	92.3	104	118	135	151

### 20K - Medium F to F (S2)

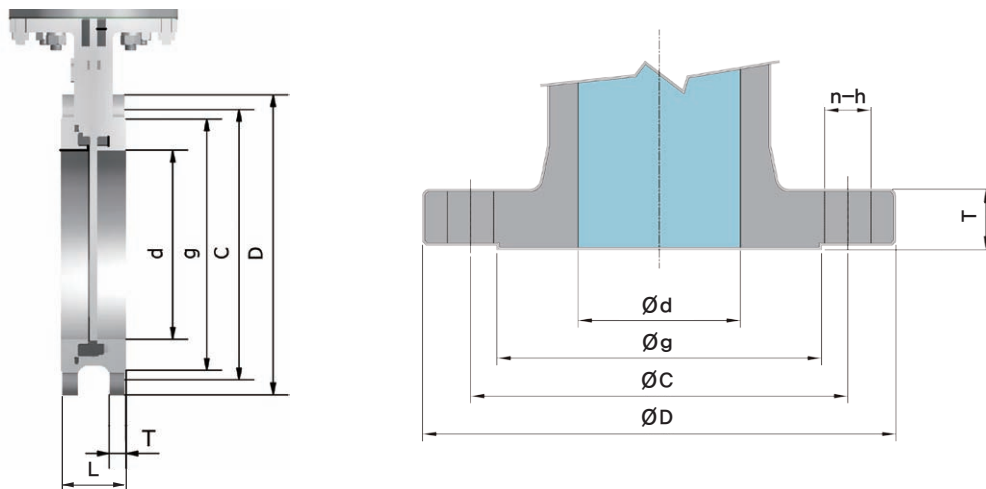
Category	Size	2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"
		(50A)	(80A)	(100A)	(125A)	(150A)	(200A)	(250A)	(300A)	(350A)	(400A)	(450A)	(500A)	(600A)	(700A)	(800A)	(900A)
F to F	S2 (mm)	150	165	180	180	188	188	208	208	231	272	280	312	334	510	570	570
Weight	S2 (Kg)	65	88	105	145	185	215	280	356	405	475	611	765	943	1046	1200	1355
Height (mm)		608	712	847	925	1061	1285	1437	1854	1968	2238	2473	2703	3259	3714	3896	4215
Torque (N.m)		28.6	28.6	39	52	65	85.8	101.4	117	143	169	195	221	247	299	351	403



Slim F to F (S1)



Medium F to F (S2)



### Pressure Class **10K**

Symbol DN	Flange										Stem		F to F	
	IN Dia.	Out Dia.	RF Dia.	Bolt Hole				Thickness T		Rotation	Rotation Tolerance	S1	S2	
	d (mm)	D (mm)	g (mm)	PCD C (mm)	Hole No. n	Hole Dia. h (mm)	Bolt Size	Others	Grey Cast Iron					
50	50	155	100	120	4	19	M16	12	20	13		51	134	
80	80	200	133	160	4	19	M16	12	24	13		51	140	
100	100	220	153	180	8	19	M16	13	25	14		51	140	
125	125	250	183	210	8	23	M20	16	25	15	+3	57	154	
150	150	285	209	240	8	23	M20	16	26	18	-2	57	164	
200	200	340	264	295	8	23	M20	18	27	24		70	164	
250	250	395	319	350	12	23	M20	20	29	25		70	180	
300	300	445	367	400	12	23	M20	22	31	30		76	180	
350	350	505	427	460	16	23	M20	23	32	34		76	198	
400	400	565	477	515	16	28	M24	26	34	35		89	232	
450	450	615	527	565	20	28	M24	28	35	40		89	240	
500	500	670	582	620	20	28	M24	28	36	40	+5	114	252	
600	600	780	682	725	20	31	M27	30	40	47	-2	114	286	
700	700	895	797	840	24	31	M27	33.5	46	56		181	324	
800	800	1015	904	950	24	34	M30	38.5	49	63		206	356	
900	900	1115	1004	1050	28	34	M30	42	51	73		226	356	
1000	1000	1230	1111	1160	28	37	M33	42	55					
1200	1200	1470	1304	1387	32	37	M33	48	63					
1350	1350	1642	1462	1552	36	38	M33	54	68					
1500	1500	1800	1620	1710	36	38	M33	74	74					
1800	1800	2197		2096	60	44	M40	67						
2000	2000	2362		2261	70	51		70						

※ The above dimensions are subject to change according to the client's request.

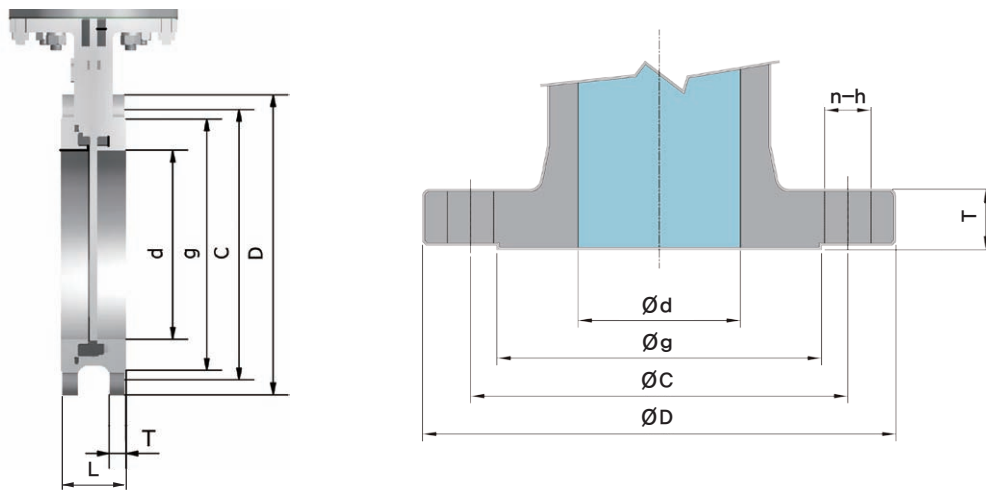


Pressure Class **16K**

Symbol DN	Flange									Stem		F to F	
	IN Dia.	Out Dia.	RF Dia.	Bolt Hole			Thickness T		Rotation	Rotation Tolerance	S1	S2	
	d (mm)	D (mm)	g (mm)	PCD C (mm)	Hole No. n	Hole Dia. h (mm)	Bolt Size	Others					Grey Cast Iron
50	50	155	100	120	4	19	M16	12	20	13	+3 -2	51	134
80	80	200	133	160	4	19	M16	12	24	13		51	140
100	100	220	153	180	8	19	M16	13	25	14		51	140
125	125	250	183	210	8	23	M20	16	25	15		57	154
150	150	285	209	240	8	23	M20	16	26	18		57	164
200	200	340	264	295	8	23	M20	18	27	24		70	164
250	250	395	319	350	12	23	M20	20	29	25		70	180
300	300	445	367	400	12	23	M20	22	31	30	76	180	
350	350	505	427	460	16	23	M20	23	32	34	76	198	
400	400	565	477	515	16	28	M24	26	34	35	89	232	
450	450	615	527	565	20	28	M24	28	35	40	89	240	
500	500	670	582	620	20	28	M24	28	36	40	+5 -2	114	252
600	600	780	682	725	20	31	M27	30	40	47		114	286
700	700	895	797	840	24	31	M27	33.5	46	56		181	324
800	800	1015	904	950	24	34	M30	38.5	49	63		206	356
900	900	1115	1004	1050	28	34	M30	42	51	73		226	356

※ The above dimensions are subject to change according to the client's request.





### Pressure Class **16K**

Symbol DN	Flange										Stem		F to F	
	IN Dia.	Out Dia.	RF Dia.	Bolt Hole			Thickness T		Rotation	Rotation Tolerance	S1	S2		
	d (mm)	D (mm)	g (mm)	PCD C (mm)	Hole No. n	Hole Dia. h (mm)	Bolt Size	Others					Grey Cast Iron	
50	50	155	96	120	8	19	M16	18	22			70	150	
80	80	200	132	160	8	23	M20	22	26			70	165	
100	100	225	160	185	8	23	M20	24	28			70	180	
125	125	270	195	225	8	25	M22	26	30			80	180	
150	150	305	230	260	12	25	M22	28	32			80	188	
200	200	350	275	305	12	25	M22	30	34			89	188	
250	250	430	345	380	12	27	M24	34	38			136.6	208	
300	300	480	395	430	16	27	M24	36	40			136.6	208	
350	350	540	440	480	16	33	M30 x 3	40	44			140	231	
400	400	605	495	540	16	33	M30 x 3	46	50			140	272	
450	450	675	560	605	20	33	M30 x 3	48	54			156	280	
500	500	730	615	660	20	33	M30 x 3	50	58			189	312	
600	600	845	720	770	24	39	M30 x 3	54	66			216	334	

※ The above dimensions are subject to change according to the client's request.

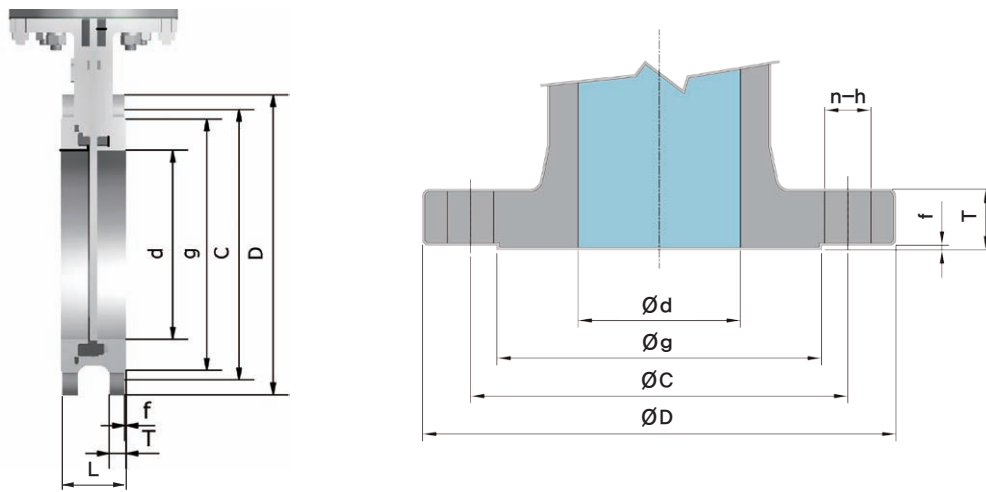
# dh Model Selection Guide

**DH - S2 - NR - E - M - 3 - 10 - 200**

① ② ③ ④ ⑤ ⑥ ⑦

Symbol	Description	Pure Water, Oil and Gas	Sludge + Water/ Oil/Gas	
<b>① Structure</b>				
S1	Water Supply Knife Gate Valve	Bonnet type	○	
SG	Soft Seat Slim Gate Valve	Bonnet+Gland type	○	
S2		Bonnet type (Medium)	○	
Type	<b>② Stem Structure</b>			
	R	Outside Screw Type	○	
	NR	Inside Screw Type	○	
	<b>③ Seat Material</b>			
	E	Rubber Seat	EPDM	○
	N		NBR	○
	V		VITON	○
	<b>④ Actuating Type</b>			
	C	Cap	○	
	H	Handle	○	
	M	Electric Actuator	○	
	P	Pneumatic Acuator	○	
	G	Gear	○	
	<b>⑤ Body Material</b>			
	3 / 3A	SSC13 / SSC13A (CF8)	○	
4 / 4A	SSC14 / SSC14A (CF8M)	○		
9A	SSC19A (CF3)	○		
6A	SSC16A (CF3M)	○		
GD	GCD450		○	
GC	GC25		○	
<b>⑥ Pressure Nominal (PN)</b>				
10 / 150	10K / 150LB	○		
16	16K	○		
20 / 300	20K / 300LB	○		
<b>⑦ DN</b>				
50 / 2" ~ 900 / 30"	50mm~900mm	○		
<b>⑧ Floor Type</b>				
2	Double-floor	○		

# dh Flange Dimensions



## BASIC DIMENSION

## AWWA C207 CLASS B and D and E

\* F to F AWWA C520

Valve Size	IN Dia.	Out Dia.	Thickness (mm)			PCD	Hole Dia.	Hole No.	Bolt Size	F to F
	d (mm)	D (mm)	B	D	E	C (mm)	h (mm)	n	h (inch)	L (mm)
4"	102	229	16	16	28.6	190.5	19	8	5/8	51
5"	127	254	16	16	30.2	216	22	8	3/4	57
6"	152	279	18	18	33.4	241.5	22	8	3/4	57
8"	203	343	18	18	38.1	298.5	22	8	3/4	70
10"	254	406	18	18	40	362	25	12	7/8	70
12"	305	483	18	21	44.5	432	25	12	7/8	76
14"	337	535	18	24	48	476	29	12	1	76
16"	387	600	18	25.4	51	539.5	29	16	1	89
18"	438	635	18	27	54	578	32	16	1 1/8	89
20"	489	698	18	29	60.3	635	32	20	1 1/8	114
24"	591	815	19.1	32	63.5	749.3	35	20	1 1/4	114
26"	625	870	21	33.4	66.7	806.4	35	24	1 1/4	172
28"	692	927	22.3	33.4	70	863.4	35	28	1 1/4	181
30"	743	985	22.3	35	70	914.4	35	28	1 1/4	188
32"	787	1060	24	38.1	73	978	41	28	1 1/2	206
34"	850	1112	24	38.1	73	1029	41	32	1 1/2	206
36"	889	1170	25.4	42	79.4	1086	41	32	1 1/2	226
38"	940	1238	25.4	42	79.4	1149	41	32	1 1/2	226
40"	978	1289	25.4	42	82.6	1200	42	36	1 1/2	226
42"	1041	1346	28.6	44.5	85.7	1257	42	36	1 1/2	248
44"	1092	1403	28.6	44.5	85.7	1314	42	40	1 1/2	248
46"	1143	1454	28.6	44.5	87.4	1365	42	40	1 1/2	248
48"	1158	1511	32	48	88.9	1422	42	44	1 1/2	292
50"	1250	1569	32	51	88.9	1480	45	44	1 5/8	292
54"	1350	1683	35	54	95.3	1594	45	44	1 5/8	292
60"	1500	1854	38.1	57.2	98.5	1759	45	52	1 5/8	304
66"	1650	2032	42	63.5	108	1930	45	52	1 5/8	320
72"	1800	2197	44.5	66.7	112	2096	45	60	1 5/8	320
78"	1950	2362	51	70	120.7	2261	51	64	2	320
84"	2100	2534	51	73	120.7	2426	51	64	2	360
90"	2250	2705	57.2	76.2	131	2591	58	68	2 1/4	360

※ The above dimensions are subject to change according to the client's request.



ANSI B 16.5 CLASS 150LB & 300LB

Size	Category		Dia. d (mm)	Out Dia. D (mm)	RF Dia. g (mm)	Thickness T (mm)	RF Thickness f (mm)	PCD C (mm)	Hole Dia. h (mm)	Bolt Size h (inch)	Hole No. n	F to F L (mm)
	Pres. Class											
2"	150 lb		51	152	92	19.1	1.6	120.5	19	5/8	4	51
	300 lb		51	165	92	22.3	1.6	127	19	5/8	8	70
3"	150 lb		76	190	127	23.9	1.6	152.5	19	5/8	4	51
	300 lb		76	210	127	28.6	1.6	168	22	3/4	8	102
4"	150 lb		102	229	157	23.9	1.6	190.5	19	5/8	8	51
	300 lb		102	254	157	31.8	1.6	200	22	3/4	8	105
5"	150 lb		127	254	186	23.9	1.6	216	22	3/4	8	57
	300 lb		127	279	186	35	1.6	235	22	3/4	8	105
6"	150 lb		152	279	216	25.4	1.6	241.5	22	3/4	8	70
	300 lb		152	318	216	36.6	1.6	270	22	3/4	12	105
8"	150 lb		203	343	270	28.6	1.6	298.5	22	3/4	8	70
	300 lb		203	381	270	41.3	1.6	330	25	7/8	12	118
10"	150 lb		254	406	324	30.2	1.6	362	25	7/8	12	70
	300 lb		254	444	324	47.7	1.6	387	29	1	16	137
12"	150 lb		305	483	381	31.8	1.6	432	25	7/8	12	76
	300 lb		305	521	381	50.8	1.6	451	32	1 1/8	16	143
14"	150 lb		337	533	413	35	1.6	476	29	1	12	76
	300 lb		337	584	413	54	1.6	514.5	32	1 1/8	20	159
16"	150 lb		387	597	470	36.6	1.6	539.5	29	1	16	89
	300 lb		387	648	470	57.2	1.6	571.5	35	1 1/4	20	168
18"	150 lb		438	635	533	39.7	1.6	578	32	1 1/8	16	89
	300 lb		432	711	533	60.4	1.6	628.5	35	1 1/4	24	178
20"	150 lb		489	698	584	42.9	1.6	635	32	1 1/8	20	114
	300 lb		483	775	584	63.5	1.6	686	35	1 1/4	24	189
24"	150 lb		591	813	692	47.5	1.6	749.3	35	1 1/4	20	114
	300 lb		584	914	692	70	1.6	813	41	1 1/2	24	216
26"	150 lb		625	870	749	68.3	1.6	806.4	35	1 1/4	24	114
	300 lb		635	970	749	79.4	1.6	876.3	44.5	1 5/8	28	216
28"	150 lb		692	927	800	71.3	1.6	863.4	35	1 1/4	28	181
	300 lb		673	1035	800	85.8	1.6	939.8	44.5	1 5/8	28	254
30"	150 lb		743	984.25	857.25	74.67	1.6	914.4	35	1 1/4	28	181
	300 lb		724	1090	857	92	1.6	997	47.75	1 3/4	28	254
32"	150 lb		787	1060	914.4	81	1.6	978	41	1 1/2	28	206
	300 lb		775	1150	914	98.5	1.6	1054.1	50.8	1 7/8	28	267
36"	150 lb		889	1170	1022.35	90.42	1.6	1086	41	1 1/2	32	226
	300 lb		889	1270	1022	104.8	1.6	1168.4	53.84	1 1/2	32	304
38"	150 lb		940	1238	1079.5	92	1.6	1149	41	1 1/2	32	226
	300 lb		927	1168	1059	109.5	1.6	1092	44.5	1 1/2	32	305
40"	150 lb		978	1289	1130	94	1.6	1200	42	1 1/2	36	226
	300 lb		978	1238	1099	114	1.6	1156	50.8	1 1/2	32	305
42"	150 lb		1041	1346	1194	96	1.6	1257	42	1 1/2	36	248
	300 lb		1029	1290	1137	119.1	1.6	1206.5	44.5	1 5/8	32	305
44"	150 lb		1092	1403	1251	101	1.6	1314	42	1 1/2	40	248
	300 lb		1080	1353	1195	125	1.6	1264	50.8	1 3/4	32	305
46"	150 lb		1143	1454	1295	104	1.6	1365	42	1 1/2	40	248
	300 lb		1130	1416	1257	130	1.6	1321	50.8	1 7/8	32	305
48"	150 lb		1158	1511	1359	108	1.6	1422	42	1 1/2	44	292
	300 lb		1181	1465	1302	133.4	1.6	1371.6	50.8	1 7/8	32	305

※ The above dimensions are subject to change according to the client's request.

# dh Flange Dimensions

JIS B 2210 CLASS 10kgf/cm<sup>2</sup> & 20kgf/cm<sup>2</sup>

Size	Category	Dia.	Out Dia.	RF Dia.	Thickness	RF Thickness	PCD	Hole Dia.	Bolt Size	Hole No.	F to F
	Pres. Class	d (mm)	D (mm)	g (mm)	T (mm)	f (mm)	C (mm)	h (mm)	h (inch)	n	L (mm)
50A	10K	50	155	96	16	2	120	19	M16	4	51
	20K	50	155	96	18	2	120	19	M16	8	70
80A	10K	80	185	126	18	2	150	19	M16	4	51
	20K	80	200	132	22	2	160	23	M20	8	102
100A	10K	100	210	151	18	2	175	19	M16	8	51
	20K	100	225	160	24	2	185	23	M20	8	105
125A	10K	125	250	182	20	2	210	23	M20	8	57
	20K	125	270	195	26	2	225	25	M22	8	105
150A	10K	150	280	212	22	2	240	23	M20	8	57
	20K	150	305	230	28	2	260	25	M22	12	105
200A	10K	200	330	262	22	2	290	23	M20	12	70
	20K	200	350	275	30	2	305	25	M22	12	118
250A	10K	250	400	324	24	2	355	25	M22	12	70
	20K	250	430	345	34	2	380	27	M22	12	137
300A	10K	300	445	368	24	3	400	25	M22	16	76
	20K	300	480	395	36	3	430	27	M24	16	143
350A	10K	340	490	413	26	3	445	25	M22	16	76
	20K	335	540	440	40	3	480	33	M30	16	159
400A	10K	400	560	475	28	3	510	27	M24	16	89
	20K	380	605	495	46	3	540	33	M30	16	168
450A	10K	450	620	530	30	3	565	27	M24	18	89
	20K	430	675	560	48	3	605	33	M30	20	178
500A	10K	500	675	585	35	3	620	27	M24	20	114
	20K	480	730	615	50	3	660	33	M30	20	189
600A	10K	600	795	690	40	3	730	33	M30	24	114
	20K	580	845	720	54	3	770	39	M36	24	216
650A	10K	650	850	745	55	3	795	33	M30	24	172
	20K	630	935	770	59	3	850	42.5	M42	28	216
700A	10K	700	905	894	60	3	850	33	M30	28	181
	20K	680	1000	825	65	3	920	42.5	M42	28	254
750A	10K	750	970	952	70	3	910	33	M30	28	188
	20K	730	1055	880	70	3	970	45.75	M48	28	267
800A	10K	800	1050	910	75	3	975	38	M36	28	206
	20K	780	1120	935	73	3	1030	58.8	M48	28	292
900A	10K	900	1160	1020	80	3	1080	38	M36	32	226
	20K	880	1230	1055	85	3	1140	51.84	M64	28	305

※ The above dimensions are subject to change according to the client's request.



DIN PN 10 & PN 16 & PN 25

Size	Category		Dia.	Out Dia.	RF Dia.	Thickness	RF Thickness	PCD	Hole Dia.	Bolt Size	Hole No.	F to F
	Pres. Class		d (mm)	D (mm)	g (mm)	T (mm)	f (mm)	C (mm)	h (mm)	h (inch)	n	L (mm)
50	PN 10		57	165	102	18	3	125	18	M16	4	51
	PN 16		57	165	102	18	3	125	18	M16	4	51
	PN 25		57	165	102	20	3	125	18	M16	4	70
80	PN 10		88.9	200	138	20	3	160	18	M16	4	51
	PN 16		88.9	200	138	20	3	160	18	M16	8	51
	PN 25		88.9	200	138	24	3	160	18	M16	8	102
100	PN 10		108	220	158	20	3	180	18	M16	8	51
	PN 16		108	220	158	20	3	180	18	M16	8	51
	PN 25		108	235	162	24	3	190	23	M20	8	105
125	PN 10		133	250	188	22	3	210	18	M16	8	57
	PN 16		133	250	188	22	3	210	18	M16	8	57
	PN 25		133	270	188	26	3	220	27	M24	8	105
150	PN 10		159	285	212	22	3	240	23	M20	8	57
	PN 16		159	285	212	22	3	240	22	M20	8	57
	PN 25		159	300	218	28	3	250	27	M24	8	105
200	PN 10		216	340	268	24	3	295	23	M20	8	70
	PN 16		216	340	268	24	3	295	22	M20	8	70
	PN 25		216	360	278	30	3	310	27	M24	12	118
250	PN 10		267	395	320	26	3	350	23	M20	12	70
	PN 16		267	405	320	26	3	350	26	M24	12	70
	PN 25		267	425	335	32	3	370	30	M27	12	137
300	PN 10		318	445	370	26	4	400	23	M20	12	76
	PN 16		318	460	370	28	4	400	26	M24	12	76
	PN 25		318	485	395	34	4	430	30	M27	16	143
350	PN 10		368	505	430	26	4	460	23	M20	16	76
	PN 16		368	520	430	30	4	460	26	M24	16	76
	PN 25		368	555	450	38	4	490	33	M30	16	159
400	PN 10		419	565	482	26	4	515	27	M24	16	89
	PN 16		419	580	482	32	4	515	30	M27	16	89
	PN 25		419	620	505	40	4	550	36	M33	16	168
500	PN 10		521	670	585	28	4	620	27	M24	20	114
	PN 16		521	715	585	44	4	620	33	M30	20	114
	PN 25		521	730	615	44	4	660	36	M33	20	189
600	PN 10		622	780	685	28	5	725	30	M27	20	114
	PN 16		622	840	685	54	5	725	36	M33	20	114
	PN 25		622	845	720	46	5	770	39	M36	20	216
700	PN 10		720	895	800	30	5	840	30	M27	24	181
	PN 16		720	910	800	36	5	840	36	M33	24	181
	PN 25		720	960	820	46	5	875	42	M39	24	254
800	PN 10		820	1015	905	32	5	950	33	M30	24	206
	PN 16		820	1025	905	38	5	950	39	M36	24	206
	PN 25		820	1085	930	50	5	990	48	M45	24	292
900	PN 10		920	1115	1005	34	5	1050	33	M30	28	226
	PN 16		920	1125	1005	40	5	1050	39	M36	28	226
	PN 25		920	1185	1030	54	5	1090	48	M45	28	305

※ The above dimensions are subject to change according to the client's request.

## Applications

Waterworks Headquarters Daegu  
Metropolitan City  
Dalseong Pumping Station



Mexico-  
MINERA BOLEO  
Copper Mining Project



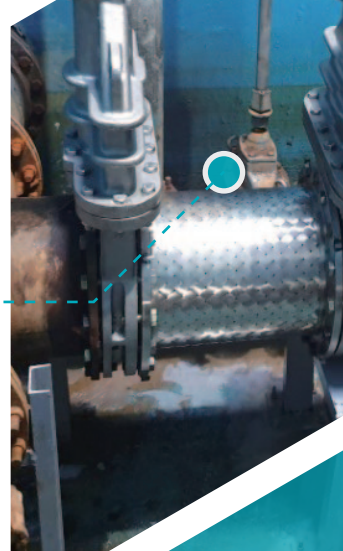
Godeok Wastewater Treatment Plant



Thermal Power Plant Seawater  
Intake Line



Andong Waterworks Jeongha  
Reservoir



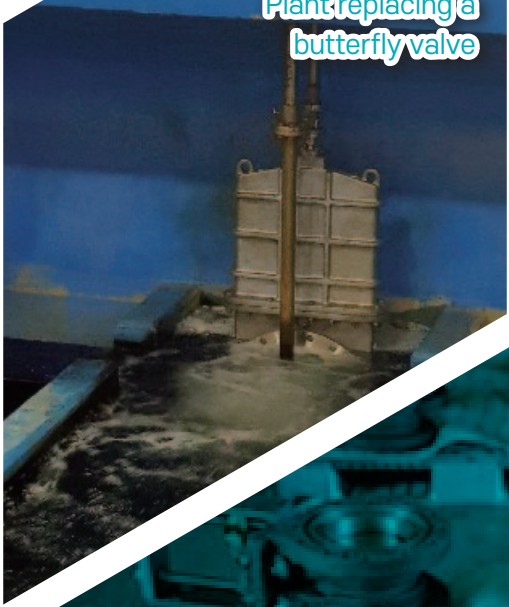


Nongong 1 Booster Station Drain Pipe  
Rehabilitation **600A**

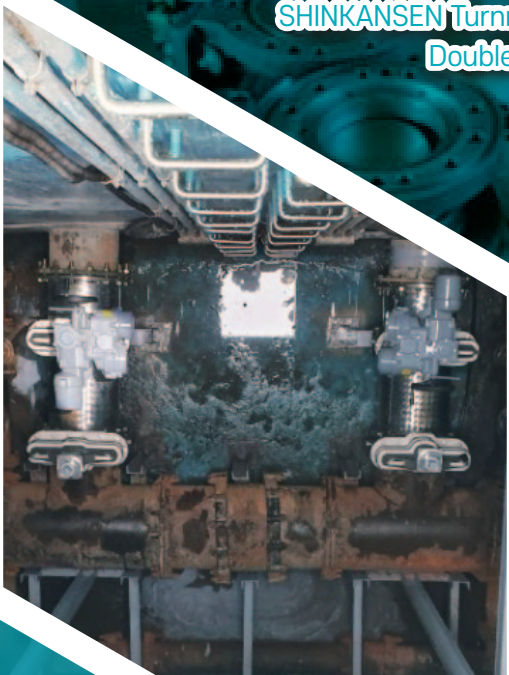
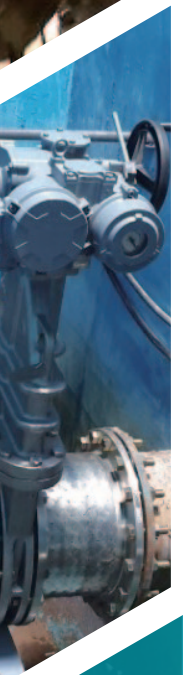
Installed at a  
Filtration Basin in  
Water Treatment  
Plant replacing a  
butterfly valve



Gyeongju Sewage  
Treatment Plant



JIM Technology/  
SHINKANSEN Tunnel Shielding PJT/  
Double type



ANSI 300LB  
Mud-line of Drill-ship

