

# NIBCO®

AHEAD OF THE FLOW®



Bronze & Iron  
Metric Standards

# Business-to-Business Solutions

Look to NIBCO for technology leadership.

The velocity with which e-business evolves demands that new products and services be continuously developed and introduced to keep our customers at the center of our business efforts. NIBCO provides an entire suite of business-to-business solutions that is changing the way we interact with customers.



[NIBCOpartner.com<sup>SM</sup>](#) is an exclusive set of secure web applications that allow quick access to customer-specific information and online order processing. This self-service approach gives you 24/7 access to your order status putting you in total control of your business.

Real time information includes:

- Online order entry
- Viewable invoices & reports
- Inventory availability
- Current price checks
- Order status
- Online library of price sheets, catalogs & submittals



**Electronic Data Interchange (EDI)** makes it possible to trade business documents at the speed of light. This technology cuts the cost of each transaction by eliminating the manual labor and paperwork involved in traditional order taking. This amounts to cost-savings, increased accuracy and better use of resources.

With EDI, you can trade:

- Purchase orders
- PO Acknowledgements
- Invoices
- Product activity data
- Advanced ship notices
- Remittance advice



**Vendor Managed Inventory (VMI)**, a sophisticated service for automated inventory management, reduces your overhead by transferring inventory management, order entry and forecasting to NIBCO. This is an on-going, interactive partnership with NIBCO.

Through automation, VMI brings results:









- Improves customer service
- Optimum inventory efficiencies
- Better forecasting
- Cuts transaction costs
- Peace of mind
- Relief from day-to-day management



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# Brass Ball Valve (PN40)

Chrome Plated Ball • Adjustable Packing Gland

40 Bar from -10°C to 100° C

18 Bar at 140°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

PART	SPECIFICATION
1. Nut	Steel
2. Handle	Steel
3. Stem Gland Screw	Brass BS2874 CZ121
4. Stem Packing	PTFE
5. Stem	Brass BS2874 CZ121
6. Body	Forged Brass BS2874 CZ122 (1/2" - 1-1/2") Cast Brass BS1400 DCB3 (2" - 4")
7. Ball Disc Packing	PTFE
8. Ball Disc	Brass BS2874 CZ121 (1/2" - 3/4") Forged Brass BS2874 CZ122 (1" - 4")
10. End Plug	Forged Brass BS2874 CZ122

## Pressure Testing

Shell	60 Bar
Seat	44 Bar

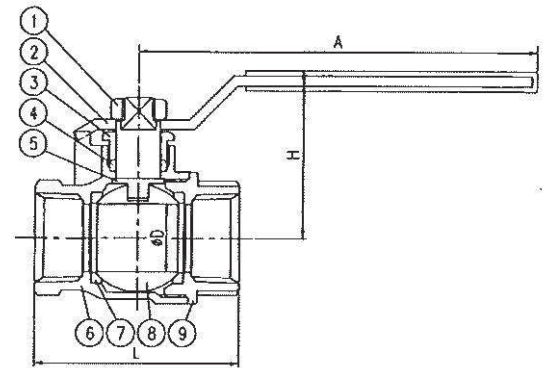
## DIMENSIONS—WEIGHTS

SIZE	Dimensions					Weight Kg.
	L	H	D	A		
In. mm.	mm.	mm.	mm.	mm.		
1/2 15	51	39	12.7	84	0.19	
3/4 20	60	50	20	118	0.37	
1 25	73	54	25	118	0.55	
1¼ 32	84	66	32	134	0.91	
1½ 40	92	70	38	200	1.23	
2 50	110	88	50	200	2.08	
2½ 65	131	98	63	200	3.06	
3 80	150	106	75	200	4.61	
4 100	164	106	75	200	5.22	



**NP 603F**

Threaded



NP 603F

# Bronze Ball Valve (PN40)

Chrome Plated Ball • Adjustable Packing Gland

40 Bar from -10°C to 100° C

18 Bar at 140°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Bronze ASTM B 584 C84400
2. Ball	Brass ASTM B 16 CA360 Chrome Plated
3. End Cap	Bronze ASTM B 584 C84400
4. Thrust Washer	PTFE
5. Ball Seals	PTFE
6. Stem Packing	PTFE
7. Packing Gland	Brass ASTM B 16 CA360
8. Stem	Brass ASTM B 16 CA360
9. Handle	Steel ASTM A 107
10. Handle Nut	Steel ASTM A 107
11. Sleeve	Vinyl

## Pressure Testing

Shell	60 Bar
Seat	44 Bar

## DIMENSIONS—WEIGHTS

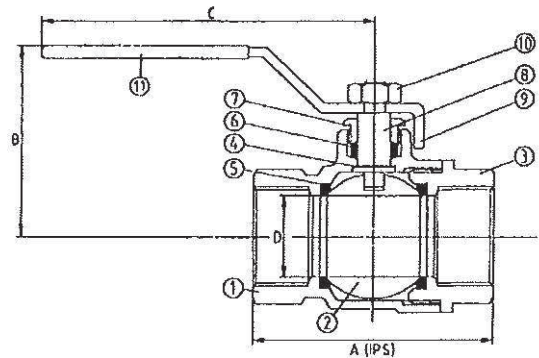
SIZE	Dimensions					Weight
	A	B	C	D		
In. mm.	mm.	mm.	mm.	mm.	mm.	Kg.
1/2 15	54.5	46.0	82.7	12.7	0.21	
3/4 20	62.0	55.0	103.0	19.0	0.34	
1 25	73.1	62.0	105.0	25.0	0.57	
1¼ 32	82.5	70.0	106.0	31.0	0.73	
1½ 40	91.7	75.0	150.0	38.0	1.11	
2 50	106.5	82.0	160.0	50.0	1.88	

NOTES: 1/2" to 1" Solid Ball; 1-1/4" to 2-1/3" Hollow Ball



**NP 601F**

Threaded



**NP 601F**

# Bronze Gate Valve (PN20)

Non-Rising Stem • Screw-in Bonnet

20 Bar from -10°C to 100° C

9 Bar at 180°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

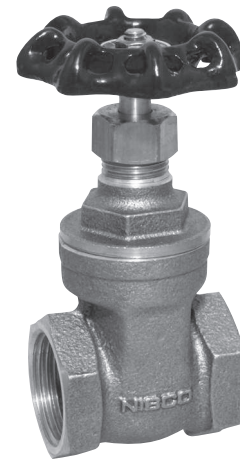
PART	SPECIFICATION
1. Body	Cast Bronze ASTM B 584 C84400
2. Disc	Cast Bronze ASTM B 584 C84400
3. Bonnet	Cast Bronze ASTM B 584 C84400
4. Lock Nut	Brass ASTM B 16 C36000
5. Stem Packing	PTFE
6. Gland	Bronze ASTM B 584 C84400
7. Packing Nut	Bronze ASTM B 584 C84400
8. Stem	Brass ASTM B 16 C36000
9. Handwheel	Cast Iron ASTM A 126 Class B
10. Wheel Nut	Steel ASTM A 563 Zinc Plated
11. Name Plate	Aluminum ASTM B 209 1100

## Pressure Testing

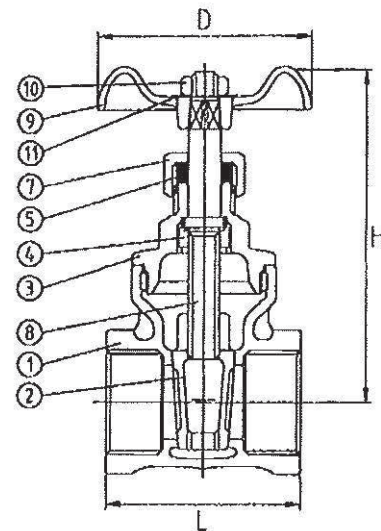
Shell (Water)	30 Bar
Seal (Air)	5.4 Bar

## DIMENSIONS—WEIGHTS

SIZE	Dimensions				Weight Kg.
	D	H	L		
In. mm.	mm.	mm.	mm.	mm.	
1/2	15	53.0	78.0	47.5	0.27
3/4	20	64.0	94.0	51.5	0.36
1	25	70.0	109.0	58.6	0.58
1¼	32	80.0	120.0	63.0	0.72
1½	40	90.0	142.0	66.5	0.98
2	50	102.0	163.0	73.5	1.55
2½	65	104.0	207.0	90.0	3.00
3	80	118.0	235.0	100.0	4.06
4	100	150.0	281.0	122.0	6.47



**NP 450**  
Threaded



**NP 450**

**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.

# Bronze Gate Valve (PN20)

Rising Stem • Screw-in Bonnet

20 Bar from -10°C to 100° C

9 Bar at 180°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Bronze ASTM B 584 C84400
2. Disc	Cast Bronze ASTM B 584 C84400
3. Bonnet	Cast Bronze ASTM B 584 C84400
5. Stem Packing	PTFE
6. Gland	Brass ASTM B 16 C36000
7. Packing Nut	Brass ASTM B 16 C36000
8. Stem	Brass ASTM B 16 C36000
9. Handwheel	Cast Iron ASTM A 126 Class B
10. Wheel Nut	Steel ASTM A 563 Zinc Plated
11. Name Plate	Aluminum ASTM B 29 1100

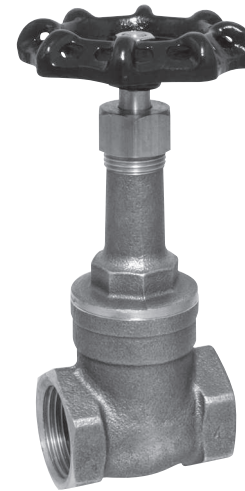
## Pressure Testing

Shell (Water)	30 Bar
Seat (Air)	5.4 Bar

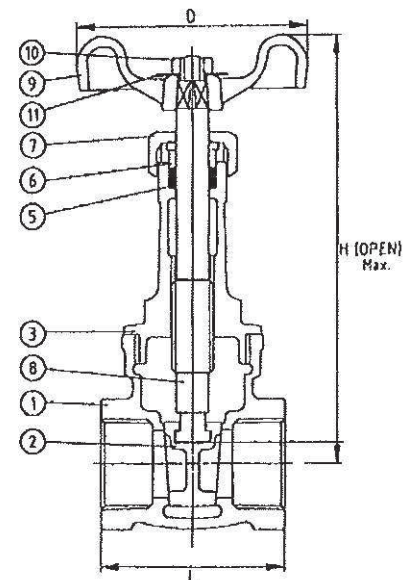
## DIMENSIONS—WEIGHTS

SIZE	Dimensions				Weight
	D	H	L		
In. mm.	mm.	mm.	mm.	mm.	Kg.
1/2 15	53.0	117.0	47.0		0.37
3/4 20	64.0	140.0	51.0		0.55
1 25	70.0	167.0	58.6		0.80
1¼ 32	80.0	195.0	63.0		1.10
1½ 40	90.0	222.0	67.0		1.43
2 50	102.0	264.0	73.5		2.39

**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.



**NP 408**  
Threaded



**NP 408**



## Bronze Globe Valve (PN20)

Screw-in Bonnet with Metal Disc

20 Bar from -10°C to 100° C

9 Bar at 180°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

### MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Bronze ASTM B 584 C84400
2. Disc	1/2" - 1" - Brass ASTM B 16 C36000 1-1/4" - 2" - Cast Bronze ASTM B 584 C84400
3. Bonnet	Cast Bronze ASTM B 584 C84400
4. Lock Nut	Brass ASTM B 16 C36000
5. Stem Packing	PTFE
6. Gland	Brass ASTM B 16 C36000
7. Packing Nut	Brass ASTM B 16 C36000
8. Stem	Brass ASTM B 16 C36000
9. Handwheel	Cast Iron ASTM A 126 Class B
10. Wheel Nut	Steel ASTM A 563 Zinc Plated
11. Name Plate	Aluminum ASTM B 29 1100

### Pressure Testing

Shell (Water)	30 Bar
Seat (Air)	5.4 Bar

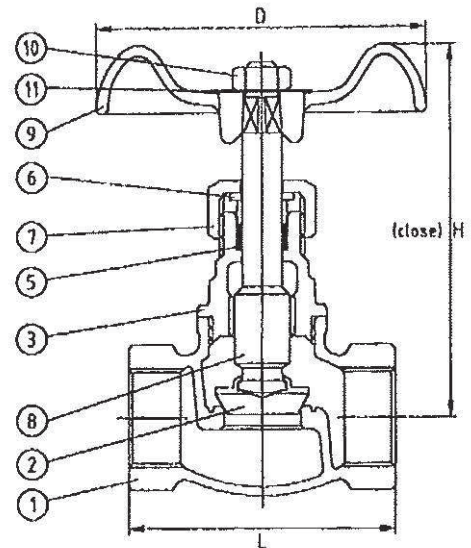
### DIMENSIONS—WEIGHTS

SIZE	Dimensions					Weight
	D	H	L			
In. mm.	mm.	mm.	mm.	mm.	Kg.	
1/2 15	53.0	70.0	49.0		0.27	
3/4 20	57.5	70.0	56.0		0.36	
1 25	64.0	87.0	65.0		0.54	
1¼ 32	74.0	94.0	75.0		0.82	
1½ 40	74.0	104.0	84.0		1.13	
2 50	87.0	124.0	99.0		1.75	

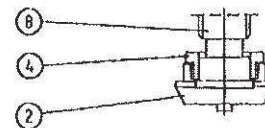
**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.



**NP 303**  
Threaded



**NP 303**



**For Sizes 1-1/4" - 2"**

# Double Regulating Balancing Valve (PN20)

Fixed Orifice • Threaded Ends to ISO 7-1 (BS21) • w/Test Points

20 Bar from -10°C to 100° C

17.2 Bar at 120°C

CONFORMS TO BS 7350

## MATERIAL LIST

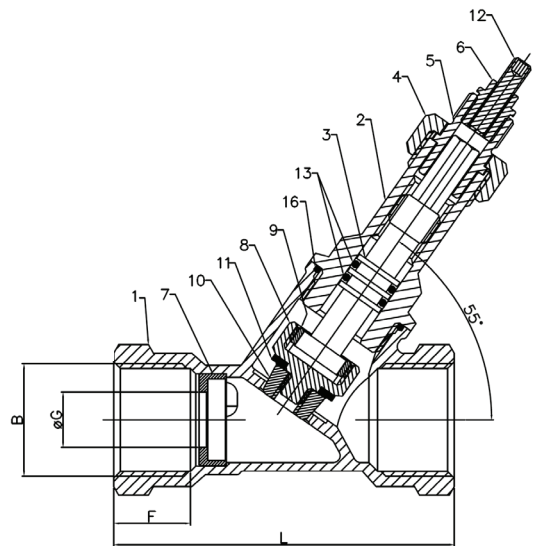
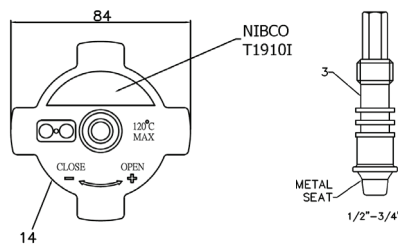
PART	SPECIFICATION
1. Body	Bronze B62 C83600 1982 CC491K
2. Bonnet	Bronze B62 C83600 1982 CC491K
3. Stem	DZR Brass C35330 12164 CW602N
4. Gland	Nut Brass C36000 12164 CW614N
5. Stem Holder	Brass C36000 12164 CW614N
6. Handle Nut	Brass C36000 12164 CW614N
7. Orifice Insert	DZR Brass C35330 12164 CW602N
8. Disc 1"- 2"	DZR Brass C35330 12164 CW602N
9. Disc Nut	1"-2" DZR Brass C35330 12164 CW602N
10. Seat Nut	1"-2" DZR Brass C35330 12164 CW602N
11. Seat 1"- 2"	PTFE
12. Adjustable Screw	Steel
13. O-Ring	EPDM D2000
14. Handwheel	Nylon 6 + 30% Fibers
15. Test Point	DZR Brass C35330 12164 CW602N
16. O-Ring	EPDM D2000



**T1910I**  
Threaded

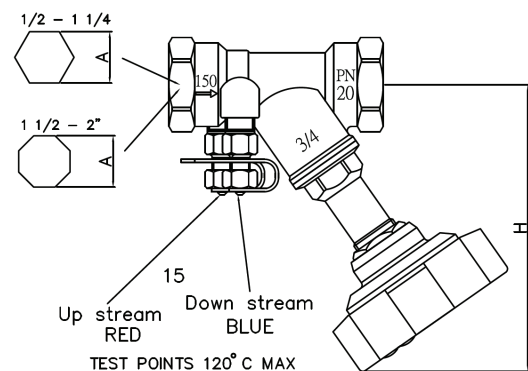
### Pressure Testing

Shell	30 Bar
Seat	22 Bar



## DIMENSIONS—WEIGHTS

SIZE	Dimensions							Kvs	Weight Kg.
	H	L	G	F	A	B			
1/2	15	110	87	8.3	18.5	26	20.995	1.99	0.61
3/4	20	110	96	12.3	20.0	32	26.441	4.27	0.65
1	25	133	100	16.3	22.0	38	33.329	7.28	0.95
1¼	32	135	114	23.4	25.0	49	41.910	15.13	1.13
1½	40	149	125	28.2	25.0	54	47.803	21.73	1.52
2	50	150	146	39.8	28.0	67	59.614	38.76	1.98



**T1910I**

# Bronze Check Valve (PN20)

T-Pattern with Metal Disc

20 Bar from -10°C to 100° C

9 Bar at 180°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Bronze ASTM B 584 C84400
2. Disc	Cast Bronze ASTM B 584 C84400
3. Cap	Cast Bronze ASTM B 584 C84400
4. Hanger Pin	Brass ASTM B 16 C36000
5. Plug	Brass ASTM B 16 C36000



**NP 326**  
Threaded

## Pressure Testing

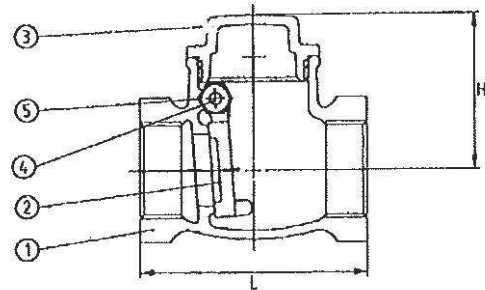
Shell (Water)	30 Bar
Seat (Air)	5.4 Bar

## DIMENSIONS—WEIGHTS

SIZE	Dimensions			Weight Kg.
	L mm.	H mm.	Weight Kg.	
1/2	15	56.0	39.5	0.24
3/4	20	70.5	42.5	0.30
1	25	80.0	50.0	0.41
1¼	32	96.5	55.0	0.60
1½	40	110.0	60.0	0.84
2	50	129.0	69.5	1.31
2½	65	138.0	90.0	2.53
3	80	151.0	100.0	3.18
4	100	178.0	114.0	5.90

**NOTES:** Check Valves may be installed in horizontal and vertical line with upward flow or in any intermediate position. They will operate satisfactory in a decline plane (no more than 15°).

**WARNING: Do NOT use for reciprocating air compressor service. Failure to follow this warning could result in personal injury or property damage.**



**NP 326**

# Bronze Y-Strainer (PN20)

20 Bar from -10°C to 100° C  
9 Bar at 180°C

THREAD ENDS CONFORM TO BS 21 TAPER THREAD (ISO 7)  
CONFORMS TO BS 5154 OR BSEN 12288

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Bronze ASTM B 584 C84400
2. Screen	Stainless Steel 304 Stainless Steel 20 MESH Netted Screen
3. Cap	Cast Bronze ASTM B 584 C84400
4. Gasket	NBR Blue Guard #3000



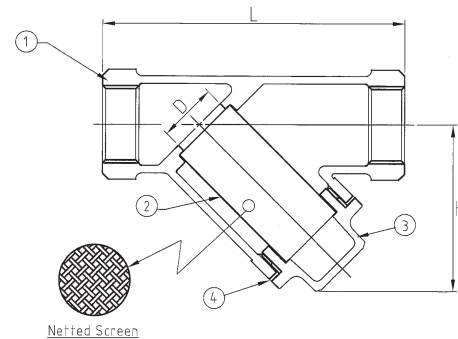
**NP 240**  
Threaded

## Pressure Testing

Shell	30 Bar
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## DIMENSIONS—WEIGHTS







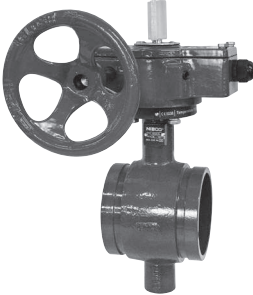



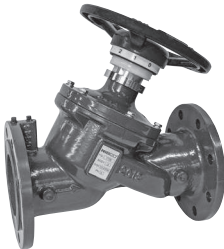
SIZE	Dimensions				Weight Kg.
	In.	mm.	mm.	mm.	
1/2	15	14.0	48.5	80.0	0.32
3/4	20	19.5	58.0	100.0	0.50
1	25	25.0	70.0	115.6	0.72
1¼	32	31.8	80.0	135.0	1.08
1½	40	38.1	93.0	160.0	1.52
2	50	50.0	112.0	190.0	2.55
2½	65	63.5	130.0	220.0	3.50
3	80	76.2	146.0	265.0	6.12



**NP 240**







# Iron Valves

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<p>Cast Iron Gate Valve (PN16) OS &amp; Y, Rising Stem Solid Wedge</p>  <p><b>NPF 620</b> Sizes 2" - 24" Page 19</p>	<p>Ductile Iron Gate Valve (PN25) OS &amp; Y, Rising Stem, Solid Wedge</p>  <p><b>NPF 630</b> Sizes 2" - 12" Page 20</p>	<p>Ductile Iron Butterfly Valve (PN20) Grooved Style Switched Gear Operator</p>  <p><b>GD 20</b> Sizes 2" - 12" Page 21</p>	<p>Ductile Iron Butterfly Valve (PN16) Extended Neck Wafer Style</p>  <p><b>NPF WDB-1000 / NE200-136</b> Sizes 2" - 24" Pages 22 - 23</p>
<p>Cast Iron Globe Valve (PN16) OS &amp; Y, Rising Stem Bolted Bonnet</p>  <p><b>NPF 719</b> Sizes 2" - 12" Page 24</p>	<p>Ductile Iron Globe Valve (PN25) OS &amp; Y, Rising Stem, Bolted Bonnet</p>  <p><b>NPF 725</b> Sizes 2" - 12" Page 25</p>	<p>Ductile Iron Balancing Valve (PN16) Double Regulating Fixed Orifice</p>  <p><b>NPF 738</b> Sizes 2-1/2" - 18" Page 26</p>	

# Iron Valves

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# Cast Iron Gate Valve (PN16)

Inside Screw • Non-Rising Stem • Flanged Ends  
• With or without Open/Shut Indicator • Solid Wedge • Bronze Trim

**16 Bar from -10°C to 100° C**

**12.8 Bar @ 200°C**

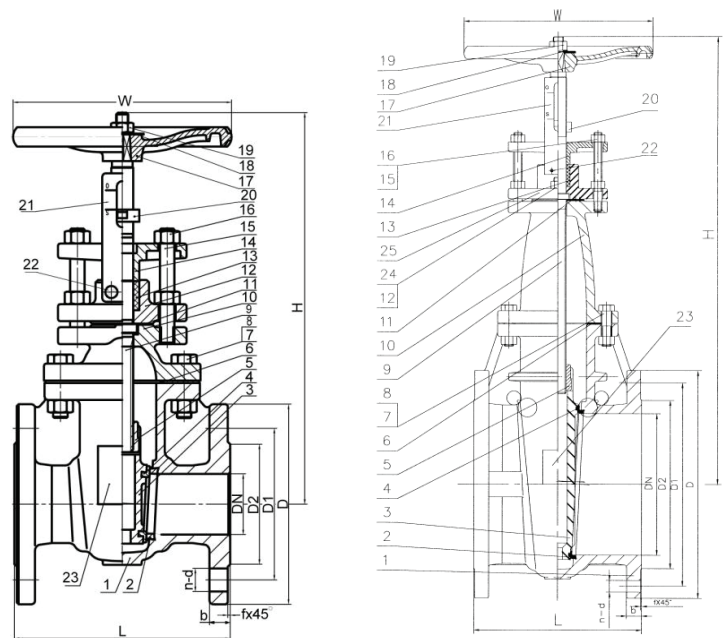
Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1171	558-1	1092-2	12266-1
BS	5150, 5151	2080	4504 Sec. 3.2	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 EN-GJL-200
2. Seat Ring	Bronze 1982 CC491K
3. Wedge	Cast Iron 1561 EN-GJL-200
4. Wedge Ring	Bronze 1982 CC491K
5. Wedge Bushing	Brass
6. Bonnet Gasket	Graphite and Steel
7. Bonnet Bolt	Carbon Steel 10025-2 S235JR
8. Bonnet Nut	Carbon Steel 10025-2 S235JR
9. Stem	Stainless Steel 10088-1 X6Cr13
10. Bonnet	Cast Iron 1561 EN-GJL-200
11. Stuffing Box Gasket	Graphite and Steel
12. Stuffing Box	Cast Iron 1561 EN-GJL-200
13. Packing	Graphite
14. Gland	Ductile Iron 1563 GJS-500-7
15. Stud	Carbon Steel 10025-2 S235JR
16. Nut	Carbon Steel 10025-2 S235JR
17. Handwheel	Cast Iron 1561 EN-GJL-200
18. Washer	Carbon Steel 10025-2 S235JR
19. Nut	Carbon Steel 10025-2 S235JR
20. Indicator	Aluminum
21. Indicator Plate	Aluminum
22. Bolt	Carbon Steel 10025-2 S235JR
23. Name Plate	Aluminum
24. Stud	Carbon Steel 10025-2 S235JR
25. Nut	Carbon Steel 10025-2 S235JR



**NPF 613**  
Flanged



2" - 8"

**NPF 613**  
FLNG x FLNG

10" - 18"

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)									Weight	
In.	mm.	DN	D1	D2	D	b	n-d	L	f	W	H	Kg.
2	50	50.0	125	99	165	20	4-19	178	3	180	319	15
2½	65	63.5	145	118	185	20	4-19	190	3	180	347	19
3	80	78.0	160	132	200	22	8-19	203	3	180	391	24
4	100	100.0	180	156	220	24	8-19	229	3	200	447	38
5	125	125.0	210	184	250	26	8-19	254	3	250	494	51
6	150	150.0	240	211	285	26	8-23	267	3	280	541	66
8	200	200.0	295	266	340	30	12-23	292	3	300	651	104
10	250	250.0	355	319	405	32	12-28	330	3	360	781	168
12	300	300.0	410	370	460	32	12-28	356	4	400	888	241
14	350	350.0	470	470	520	36	16-28	381	4	505	1120	420
16	400	400.0	525	525	580	38	16-31	406	4	556	1200	558
18	450	450.0	585	548	640	40	20-31	432	4	610	1310	748
20	500	508.0	650	609	715	42	20-34	457	4	640	1303	947
24	600	610.0	770	720	840	48	20-37	508	5	640	1460	1280

## Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

# Cast Iron Gate Valve (PN16)

Inside Screw • Non-Rising Stem • Solid Wedge • Bronze Trim

**16 Bar from -10°C to 120° C**

**12.8 Bar / 200° C**

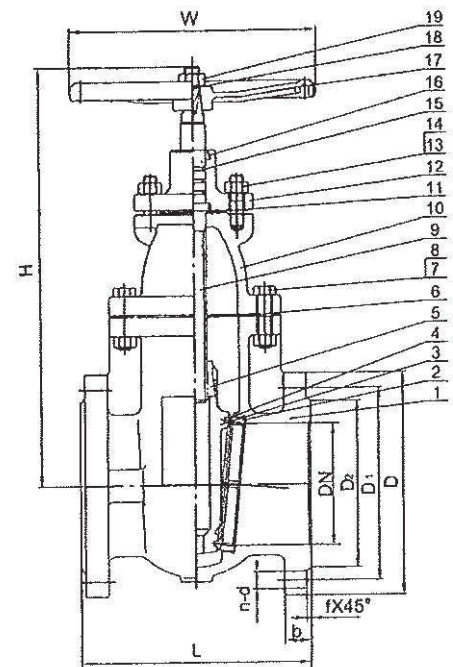
Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1074	558-1	1092-2	12266-1
BS	5163	5163/2080	4504-3.2	5163

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 EN JL1030
2. Seat Ring	Bronze 1982 CC491K
3. Wedge	Cast Iron 1561 EN JL1030
4. Wedge Ring	Bronze 1982 CC491K
5. Wedge Nut	Brass
6. Bonnet Gasket	Graphite and Steel
7. Bonnet Bolt	Steel BSEN 10025-2 S235JR
8. Bonnet Nut	Steel BSEN 10025-2 S235JR
9. Stem	Stainless Steel BSEN 10088-1
10. Bonnet	Cast Iron 1561 EN JL1030
11. Stuffing Box Gasket	Graphite and Steel
12. Gland	Cast Iron 1561 EN JL1030
13. Bolt	Steel BSEN 10025-2 S235JR
14. Nut	Steel BSEN 10025-2 S235JR
15. O-Ring	NBR
16. Dustproof Ring	NBR
17. Handwheel	Cast Iron 1561 EN JL1030
18. Washer	Steel BSEN 10025-2 S235JR
19. Nut	Steel BSEN 10025-2 S235JR



**NPF 618**  
Flanged



**NPF 618**  
FLNG x FLNG

## Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)									Weight
In.	mm.	L	D	D1	D2	b	n-d	f	W	H	Kg.
2	50	178	165	125	99	20	4-19	3	180	278	15
2½	65	190	185	145	118	20	4-19	3	180	311	19
3	80	203	200	160	132	22	8-19	3	180	339	24
4	100	229	220	180	156	24	8-19	3	200	393	38
5	125	254	250	210	184	26	8-19	3	250	454	51
6	150	267	285	240	211	26	8-23	3	280	501	66
8	200	292	340	295	266	30	12-23	3	300	592	104
10	250	330	405	355	319	32	12-28	3	360	730	168
12	300	356	460	410	370	32	12-28	4	400	852	241
14	350	381	520	470	429	36	16-28	4	505	1040	427
16	400	406	580	525	480	38	16-31	4	556	1136	538
18	450	432	640	585	548	40	20-31	4	610	1212	650
20	500	457	715	650	609	42	20-34	4	640	1301	950
24	600	508	840	770	720	48	20-37	5	640	1457	1284

**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.



# Ductile Iron Gate Valve (PN25)

Inside Screw • Non-Rising Stem • Bronze Trim • Flanged Ends

**25 Bar from -10°C to 120° C**

**17.5 Bar @ 350° C**

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1171	558-1 Ser. 4 PN25	1092-2 PN25	12266-1, 12266-2
BS	5150	2080 Ser. 4 PN25	4504 Sec. 3.2 PN25	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Ductile Iron BSEN 1563 EN-JS 1030
2. Seat Ring	Bronze BSEN 1982 CC491K
3. Wedge	Ductile Iron BSEN 1563 EN-JS 1030
4. Wedge Ring	Bronze BSEN 1982 CC491K
5. Wedge Nut	Bronze BSEN 1982 CC491K
6. Bonnet Gasket	Graphite and Steel
7. Bonnet Bolt	Carbon Steel ASTM A307
8. Bonnet Nut	Carbon Steel ASTM A307
9. Stem	Stainless Steel BSEN100881 X17CrNi 16-2
10. Bonnet	Ductile Iron BSEN 1563 EN-JS 1030
11. Stuffing Box Gasket	Graphite and Steel
12. Stuffing Box	Ductile Iron BSEN 1563 EN-JS 1030
13. Packing	Graphite
14. Packing Gland	Ductile Iron BSEN 1563 EN-JS 1030
15. Packing Gland Bolt	Carbon Steel ASTM A307
16. Packing Gland Nut	Carbon Steel ASTM A307
17. Handwheel	Cast Iron BSEN 1561 EN JL1030
18. Washer	Carbon Steel Plate
19. Nut	Carbon Steel ASTM A307

Optional: Stainless Steel Trim

### Pressure Testing

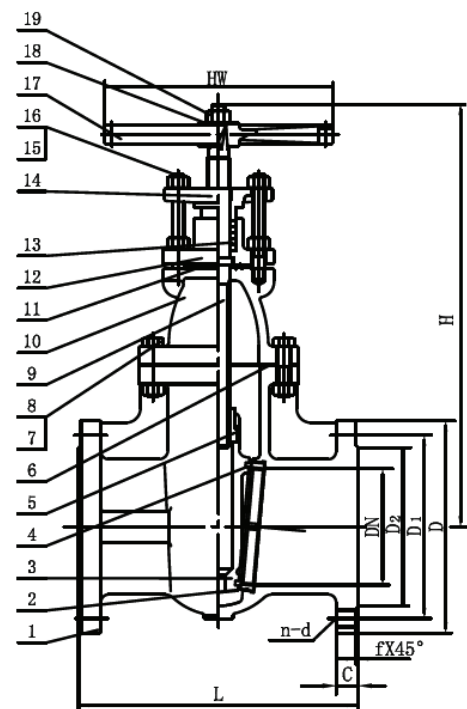
Shell	37.5 Bar
Seat	27.5 Bar

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)									Weight
In.	mm.	L	D	D1	D2	C	n-d	f	H	HW	Kg.
2	50	216	165	125	99	19.0	4-19	3	309	180	16
2½	65	241	185	145	118	19.0	8-19	3	324	180	20
3	80	283	200	160	132	19.0	8-19	3	370	200	24
4	100	305	235	190	156	19.0	8-23	3	430	250	39
5	125	381	270	220	184	19.0	8-28	3	475	280	52
6	150	403	300	250	211	20.0	8-28	3	538	300	67
8	200	419	360	310	274	22.0	12-28	3	678	360	106
10	250	457	425	370	330	24.5	12-31	3	750	400	170
12	300	502	485	430	389	27.5	16-31	4	880	450	244



**NPF 625**  
Flanged



**NPF 625**  
FLNG x FLNG

# Ductile Iron Gate Valve (PN16)

Inside Screw • Non-Rising Stem • Resilient Wedge •  
Flanged Ends • with Supervisory Switch & Indicator Plate

16 Bar from 0°C to 71° C

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1074	558-1	1092-2	12266-1
BS	5163	5163/2080	4504-3.2	5163

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Ductile Iron ASTM A536 Gr. 65-45-12
2. Resilient Wedge	Ductile Iron ASTM A536 Gr. 65-45-12/ ASTM D2000
3. Stem Nut	Bronze ASTM B584
4. Stem	Bronze ASTM B150 C61400
5. Bonnet	Ductile Iron ASTM A536 Gr. 65-45-12
6. Bonnet Gasket	EPDM ASTM D2000
7. O-Ring	EPDM ASTM D2000
8. Gasket	Bronze ASTM B548 (Lower) Stainless Steel ASTM A276 (Upper)
9. Handwheel	Ductile Iron ASTM A536 Gr. 65-45-12
10. Washer	Carbon Steel
11. Screw	Steel ASTM A574M
12. Indicator	Brass
13. Ring Wiper	EPDM ASTM D2000
14. Gland	Ductile Iron ASTM A536 Gr. 65-45-12
15. Stem Collar	Brass/PTFE
16. O-ring	EPDM ASTM D2000
17. O-ring	EPDM ASTM D2000
18. Socket Hex. Bolt	Carbon Steel ASTM A574
19. Indicator Plate	Stainless Steel 304 ASTM A276
20. Supervisory Switch	Bernstein 188-SUIZW (0.06 kg)
21. Socket Hex. Bolt	Carbon Steel ASTM A574
22. Switch Adjustable Bracket	Aluminum
23. Slotted Pan Head Screw	Carbon Steel ASTM A574
24. Switch Mounting Plate	Aluminum
25. Screw	Carbon Steel ASTM A574

### Pressure Testing

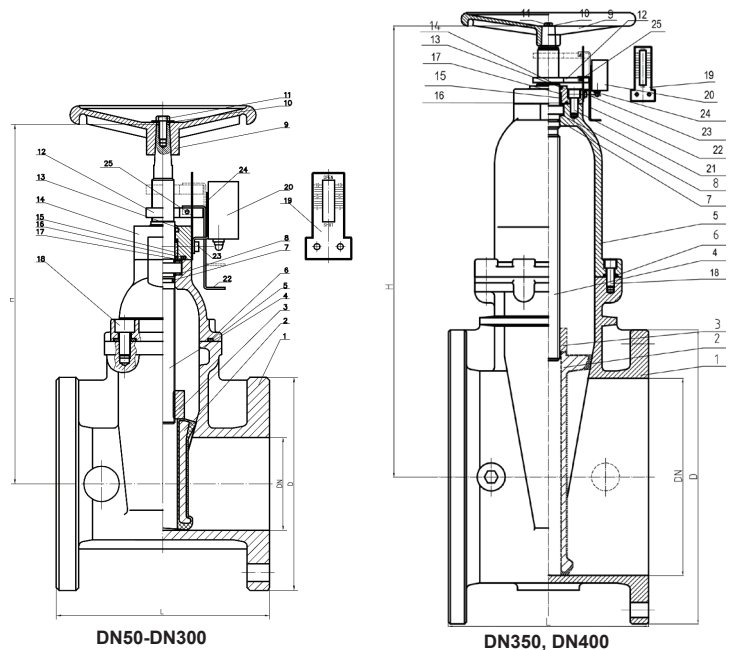
Shell	24 Bar
Seat	17.6 Bar

### DIMENSIONS—WEIGHTS

SIZE	Dimensions (mm)			Weight	
In.	mm.	L	D	H	Kg.
2	50	178	165	315	15.64
2½	65	190	185	343	17.91
3	80	203	200	377	22.45
4	100	229	220	400	34.27
6	150	267	285	495	57.95
8	200	292	340	586	91.56
10	250	330	405	670	136.64
12	300	356	460	750	196.64
14	350	381	520	866	276.23
16	400	406	580	945	371.68



**NPF 619RW-ES**  
Flanged



**NPF 619RW-ES**  
FLNG x FLNG

# Cast Iron Gate Valve (PN16)

OS & Y • Rising Stem • Solid Wedge • Flanged Ends • Bronze Trim

16 Bar from -10°C to 120°C

12.8 Bar/200°C

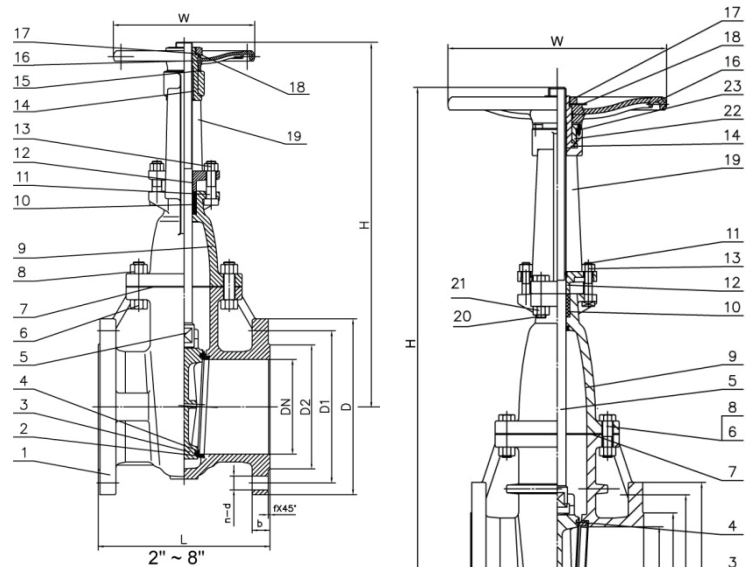
Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1071	558-1	1092-2	12266-1
BS	5150	2080	4504-3.2	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 EN-JL1030
2. Seat Ring	Bronze 1982 CC491K
3. Wedge	Cast Iron 1561 EN-JL-1030
4. Wedge Ring	Bronze 1982 CC491K
5. Stem	Stainless Steel 10088-1 X6Cr13
6. Bonnet Bolt	Structural Steel 10025-2 S235JR
7. Bonnet Gasket	Graphite and Steel
8. Bonnet Nut	Structural Steel 10025-2 S235JR
9. Bonnet	Cast Iron 1561 EN-JL1030
10. Packing	Graphite
11. Bolt	Structural Steel 10025-2 S235JR
12. Gland Flange	Ductile Iron 1563 EN-GJS-500-7
13. Nut	Structural Steel 10025-2 S235JR
14. Stem Nut	Brass
15. Washer	Brass
16. Handwheel	Cast Iron 1561 EN-JL1030
17. Handwheel Nut	Ductile Iron 1563 EN-GJS-500-7
18. Name Plate	Aluminium
19. Yoke	Cast Iron 1561 EN-JL1030
20. Bolt	Structural Steel 10025-2 S235JR
21. Nut	Structural Steel 10025-2 S235JR
22. Yoke Nut Bushing	Cast Iron 1561 EN-JL1030
23. Screw	Structural Steel 10025-2 S235JR



**NPF 620**  
Flanged



**NPF 620**  
FLNG x FLNG

**NPF 620**  
FLNG x FLNG

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)										Weight
In.	mm.	DN	D1	D2	D	b	n-d	L	f	W	H	Kg.
2	50	50	125	99	165	20	4-19	178	3	180	278	16
2½	65	63.5	145	118	185	20	4-19	190	3	180	311	20
3	80	78	160	132	200	22	8-19	203	3	180	340	24
4	100	100	180	156	220	24	8-19	229	3	200	393	38
5	125	125	210	184	250	26	8-19	254	3	250	454	52
6	150	150	240	211	285	26	8-23	267	3	280	502	68
8	200	200	295	266	340	30	12-23	292	3	300	592	105
10	250	250	355	319	405	32	12-28	330	3	360	897	175
12	300	300	410	370	460	32	12-28	356	4	400	1055	248
14	350	350	470	429	520	36	16-28	381	4	505	1258	442
16	400	400	525	480	580	38	16-31	406	4	556	1410	596
18	450	450	585	548	640	40	20-31	432	4	610	1565	796
20	500	500	650	609	715	42	20-34	457	4	610	1723	990
24	600	600	770	720	840	48	20-37	508	5	700	1970	1341

### Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.

# Ductile Iron Gate Valve (PN25)

OS&Y • Rising Stem • Solid Wedge • Bronze Trim • Flanged Ends

**25 Bar from -10°C to 120°C**  
**17.5 Bar @ 350°C**

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	1171	558-1 Ser. 4 PN25	1092-2 PN25	12266-1, 12266-2
BS	5150	2080 Ser. 4 PN25	4504 Sec. 3.2 PN25	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Ductile Iron BSEN 1563 EN-JS 1030
2. Seat Ring	Bronze BSEN 1982 CC491K
3. Wedge	Ductile Iron BSEN 1563 EN-JS 1030
4. Wedge Ring	Bronze BSEN 1982 CC491K
5. Stem	Stainless Steel BSEN 100881 X17CrNi16-2
6. Bonnet Gasket	Graphite and Steel
7. Bonnet Bolt	Carbon Steel A307
8. Bonnet Nut	Carbon Steel A307
9. Bonnet	Ductile Iron BSEN 1563 EN-JS 1030
10. Back Seat Bushing	Brass BSEN 12164 CW603N
11. Packing	Graphite
12. Yoke Bolt	Carbon Steel ASTM A307
13. Yoke Nut	Carbon Steel ASTM A307
14. Packing Gland	Ductile Iron BSEN 1563 EN-JS 1030
15. Packing Gland Bolt	Carbon Steel ASTM A307
16. Packing Gland Nut	Carbon Steel ASTM A307
17. Yoke	Ductile Iron BSEN 1563 EN-JS 1030
18. Stem Nut	Bronze BSEN 1982 CC491K
19. Stem Nut Bushing	Cast Iron BSEN 1561 EN-JL1030
20. Screw	Carbon Steel
21. Handwheel	Cast Iron BSEN 1561 EN-JL1030
22. Handwheel Nut	Ductile Iron 1563 EN-JS 1030

Optional: Stainless Steel Trim

### Pressure Testing

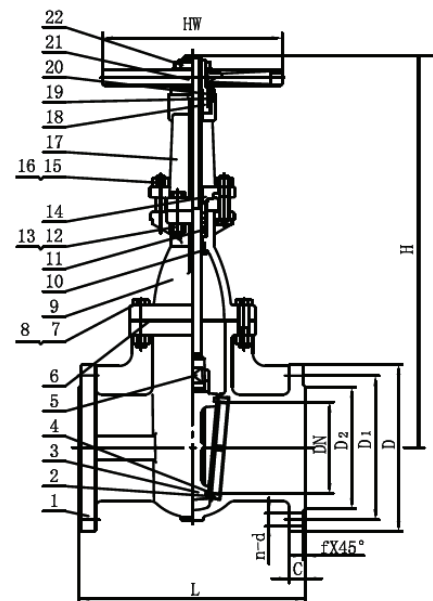
Shell	37.5 Bar
Seat	27.5 Bar

## DIMENSIONS

SIZE	Dimensions (mm)										Weight
In.	mm.	L	D	D1	D2	C	n-d	f	H	HW	Kg.
2	50	216	165	125	99	19.0	4-19	3	330	180	16
2½	65	241	185	145	118	19.0	8-19	3	342	180	20
3	80	283	200	160	132	19.0	8-19	3	391	200	26
4	100	305	235	190	156	19.0	8-23	3	487	250	39
5	125	381	270	220	184	19.0	8-28	3	517	280	53
6	150	403	300	250	211	20.0	8-28	3	652	300	69
8	200	419	360	310	274	22.0	12-28	3	796	360	107
10	250	457	425	370	330	24.5	12-31	3	962	400	177
12	300	502	485	430	389	27.5	16-31	4	1083	450	251



**NPF 630**  
Flanged

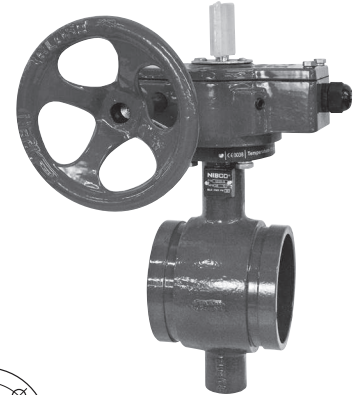


**NPF 630**  
FLNG x FLNG

# Ductile Iron Butterfly Valves, PN20 (290PSI)

20 Bar from -30°C to 110°C

END-TO-END CONFORMS TO MSS SP-67 • TOPWORK TO ISO 5211 •  
DIMENSIONS FOR GROOVED ENDS CONFORM TO ANSI AWWA C606  
• WITH SWITCHED GEAR OPERATOR

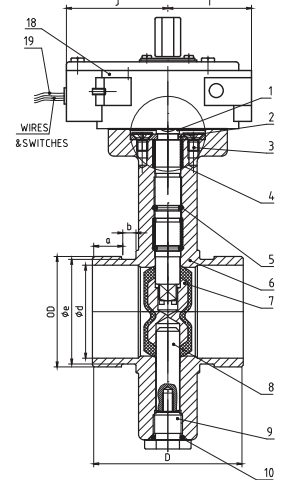
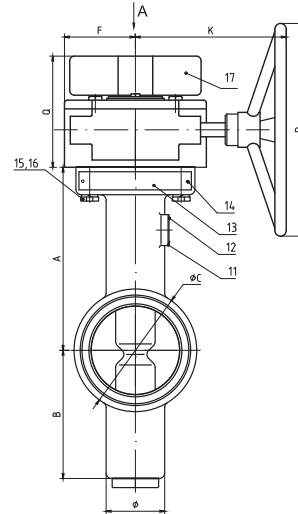
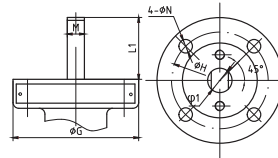
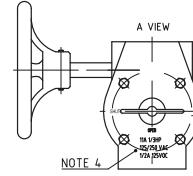


**GD20**

## MATERIAL LIST

### PART SPECIFICATION

1. Upper Stem	Stainless Steel ASTM A582 Grade 416
2. Stop Cover	Steel
3. Bolts	Steel
4. Bushing	PTFE
5. O-Ring	Buna-N ASTM D2000
6. Body	Ductile Iron ASTM A536 65-45-12
7. Disc	Ductile Iron ASTM A536 65-45-12, coated with EPDM
8. Lower Stem	Stainless Steel ASTM A582 Grade 416
9. Screw End	Carbon Steel
10. O-Ring	Buna-N ASTM D2000
11. Name Plate	Aluminum
12. Rivet	Aluminum
13. Name Plate	Aluminum
14. Rivet	Aluminum
15. Bolts	Steel
16. Spring Spacer	Carbon Steel AISI 1566
17. Indicator Flag	Cast Iron ASTM A126-B
18. Gear Operator	Cast Iron Housing & Ductile Iron Gear
19. Wire & Switches	--



### Pressure Testing

Shell	30 Bar
Seat	22 Bar

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)															
Inch	mm	OD	a	b	Øe	Ød	ØC	ØG	ØH	ØN	Ø1	A	B	D	L1	Ø	M
2	50	60.3	16	7.93	57.15	50.8	67	65	50	7	12.6	100	70	82.4	32	30	8.86
2½	65	73.0	16	7.93	69.09	63.5	80	65	50	7	12.6	106	75	96.8	32	32	8.86
	76.1	76.1	16	7.93	72.3	63.5	80	65	50	7	12.6	106	75	96.8	32	32	8.86
3	80	88.9	16	7.93	84.9	76.2	97	65	50	7	12.6	112.5	82	96.8	32	32	8.86
4	100	114.3	16	9.53	110.08	99.5	123	90	70	10	15.77	135	100	115.85	32	38	11.1
5	125	141.3	16	9.53	137	128.0	151	90	70	10	18.92	148.7	119	147.6	32	44	12.7
	165.1	165.0	16	9.53	161	149.0	180	90	70	10	18.92	176	130	147.6	32	47	12.7
6	150	168.3	16	9.53	163.96	149.0	180	90	70	10	18.92	176	130	147.6	32	47	12.7
8	200	219.1	19	11.1	214.40	203.2	231	125	102	12	22.1	204	162	133.4	45	53	15.9
10	250	273.05	19	12.7	268.27	253.0	284	125	102	12	28.45	228.09	200.31	158.75	45	60	20.6
12	300	323.85	19	12.7	318.3	303.0	335	140	102	12	31.6	226.19	223.88	163.58	45	64	22.1

### Gear Operator Data (mm)

Valve Size	Ratio	P	F	K	I	J	Q
2"~6"	24:1	150	54	151	74	89	113
8", 10"	30:1	300	77	238	87	90	123
12"	50:1	300	83	227	82	116	124

Note: 11A 1/3HP  
125/250 VAC  
1/2A 125VOC

**WARNING: NOT RATED FOR STEAM SERVICE. Failure to follow this warning could result in personal injury or property damage.**

NOTE:

1.End-to-End dimensions according to MSS SP-67-2002.  
2.Dimensions for Grooved according to ANSI/AWWA C606-97.  
3.Dimensions for topwork according to ISO5211.

4. 11A 1/3HP  
125/250 VAC  
1/2A 125VOC.

# Ductile Iron Butterfly Valve (PN16)

Extended Neck • Wafer Style • Lever Handle or Gear Operator

Sizes 2" - 12"

16 Bar EPDM from -30°C to 110° C

BSEN 593 • WAFER FLANGE TO BS 4504 •  
BSEN 1092-2 • FACE-TO-FACE BSEN 558-1 • ISO 5752 • BS 2080

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Ductile Iron BSEN 1563 GJS-400-15
2. Long Bushing	Bronze BSEN 1982 CC491K
3. Stem	Stainless Steel 416 BSEN 10088-1
4. Seat	Rubber EPDM
5. Disc	Ductile Iron BSEN 1563 GJS-400-15
6. Taper Pin	Stainless Steel 416 BSEN 10088-1
7. Name Plate	Aluminum
8. Plate Rivet	Aluminum
9. Short Bushing	Bronze BSEN 1982 CC491K
10. O-Ring	Rubber NBR
11. Bolts	Steel
12. Spring Spacer	
13. Nut	Steel
14. Latch Plate	Steel
15. Lever Handle	Ductile Iron BSEN 1563 GJS-400-15

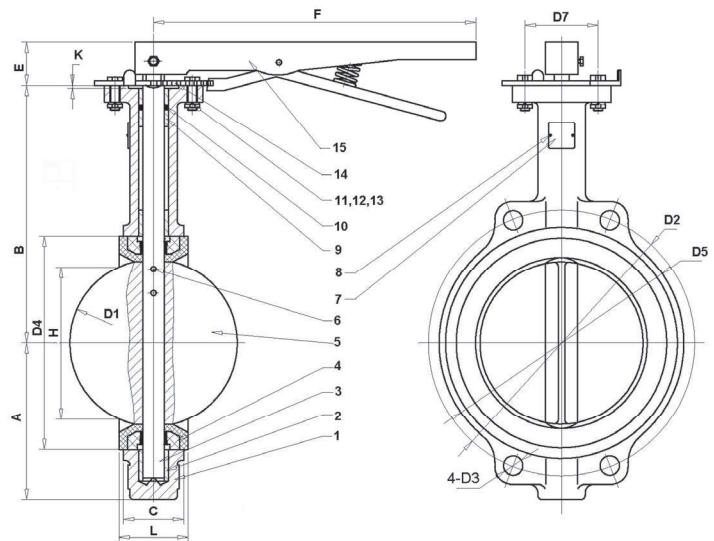
### Pressure Testing

Shell	24 Bar
Seat	17.6 Bar



**WDB-1000 /  
NE200-136**

Wafer



**WDB-1000/NE200-136**

Wafer

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)																	Weight		
In.	mm.	D1	D2	D3	D4	D5	D6	D7	D8	K	D9	d0*	h	A	B	C	E	F	H	L	Kg.
2	50	52.88	125	19	76.30	100	77	50	35	4	7	12.60	9	80	161	42.0	32	267	32.30	45.00	3.50
2½	65	64.49	145	19	89.00	120	77	50	35	4	7	12.60	9	89	175	44.7	32	267	46.10	47.60	4.30
3	80	78.84	160	19	103.90	127	77	50	35	4	7	12.60	9	95	181	45.2	32	267	64.40	49.00	4.70
4	100	104.04	180	19	135.00	156	92	70	55	4	10	15.77	11	114	200	52.1	32	267	86.30	54.70	6.50
5	125	123.32	210	19	159.00	190	92	70	55	4	10	18.92	14	127	213	54.4	32	267	110.60	58.00	8.70
6	150	155.58	240	23	188.40	212	92	70	55	4	10	18.92	14	139	226	55.8	32	267	134.80	58.60	9.80
8	200	202.46	295	23	238.12	268	125	102	70	4	12	22.10	19	175	260	60.6	45	323	192.40	63.40	15.50
10	250	250.47	355	28	292.35	325	125	102	70	4	12	28.45	22	203	292	65.6	45	499	241.70	70.00	20.00
12	300	311.55	410	28	344.09	402	150	125	85	4	14	31.60	27	242	337	76.9	45	499	291.80	80.10	29.00

\* d0 = Stem diameter not shown in drawings  
h = Mounting flange hole diameter

**WARNING: NOT RATED FOR STEAM SERVICE. Failure to follow this warning could result in personal injury or property damage.**

# Ductile Iron Butterfly Valve (PN16)

Extended Neck • Wafer Style • Gear Operated

Sizes 14" - 24"

16 Bar EPDM from -30°C to 110° C

BSEN 593 • WAFER FLANGE TO BS 4504 •  
BSEN 1092-2 • FACE-TO-FACE BSEN 558-1 • ISO 5752 • BS 2080

## MATERIAL LIST

PART	SPECIFICATION
1. Screw	Steel
2. O-Ring	Rubber NBR
3. Cap Plate	Ductile Iron 1563 GJS-400-15
4. Body	Ductile Iron 1563 GJS-400-15
5. Middle Bushing	Bronze 1982 CC491K
6. Seat	Rubber EPDM
7. Disc	Ductile Iron 1563 GJS-400-15
8. Stem	Stainless Steel 416 10088-1
9. Tapper Pin	Stainless Steel 416 10088-1
10. Long Bushing	Bronze 1982 CC491K
11. Plate Rivet	Aluminum
12. Name Plate	Aluminum
13. Short Bushing	Bronze 1982 CC491K
14. O-Ring	Rubber NBR
15. Bolt	Steel
16. Washer	Steel
17. Key	Steel
18. Gear Box	

### Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

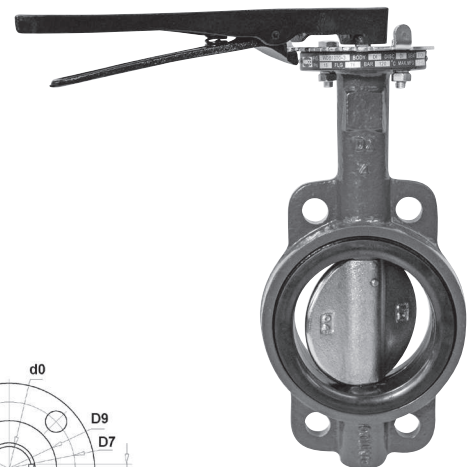
## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)													
In.	mm.	D1	D2	D3	D4	D5	D6	D7	D8	D9	d0	A	B	K	B1.
14	350	333.32	470	28	375.20	436	140	102	12	70	31.60	635	368	34.60	8
16	400	389.61	525	31	439.52	488	197	140	18	100	37.95	709	400	40.95	10
18	450	440.51	585	31	490.50	539	197	140	18	100	42.86	750	422	45.86	12
20	500	491.64	650	34	535.43	593	197	140	18	100	45.72	841	480	48.72	12
24	600	592.50	770	37	654.02	816	276	165	22	130	53.98	1021	562	57.98	16

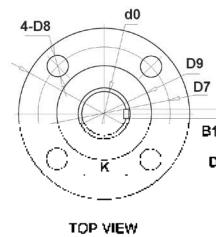
## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)											Weight		
In.	mm.	C	E	H	H1	h	L	M	KEY	Gear Box Type	a	b	Ø	f	Kg.
14	350	75.17	45.00	322	425	4	79.5	34.60	8 x Ø28	3D-120	309	294	300	189	61.3
16	400	85.70	72.00	380	459	5	90.0	40.95	8 x Ø28	3D-250	400	379	300	210	100.5
18	450	104.60	72.00	428	481	5	109.0	45.86	8 x Ø28	3D-30/250	426	361	300	274	118.5
20	500	130.28	82.00	473	551	5	135.0	48.72	8 x Ø28	3D-30/400	479	417	300	279	155.5
24	600	151.36	82.00	528	633	6	156.0	57.98	8 x Ø28	3D-30/400	479	417	300	279	268.9

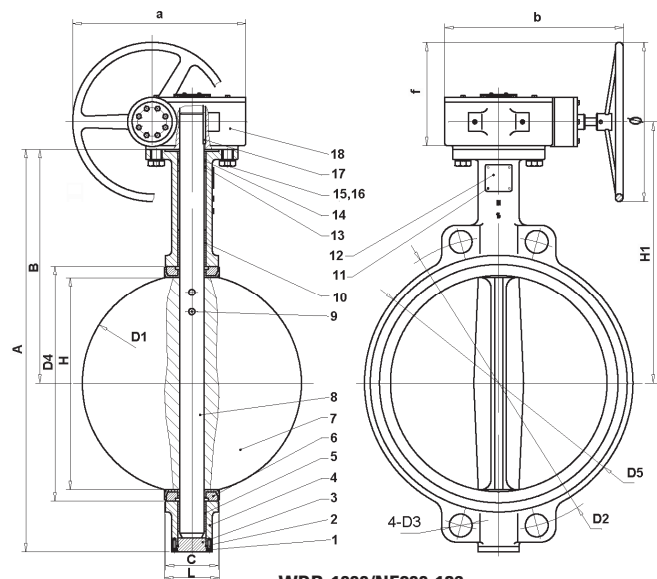
**WARNING: NOT RATED FOR STEAM SERVICE.** Failure to follow this warning could result in personal injury or property damage.



**WDB-1000 /  
NE200-136**  
Wafer



TOP VIEW



**WDB-1000/NE200-136**  
Wafer

# Cast Iron Globe Valve (PN16)

OS & Y • Rising Stem • Bronze Trim • Bolted Bonnet

16 Bar from -10°C to 120° C

12.8 Bar / 200° C



**NPF 719**  
Flanged

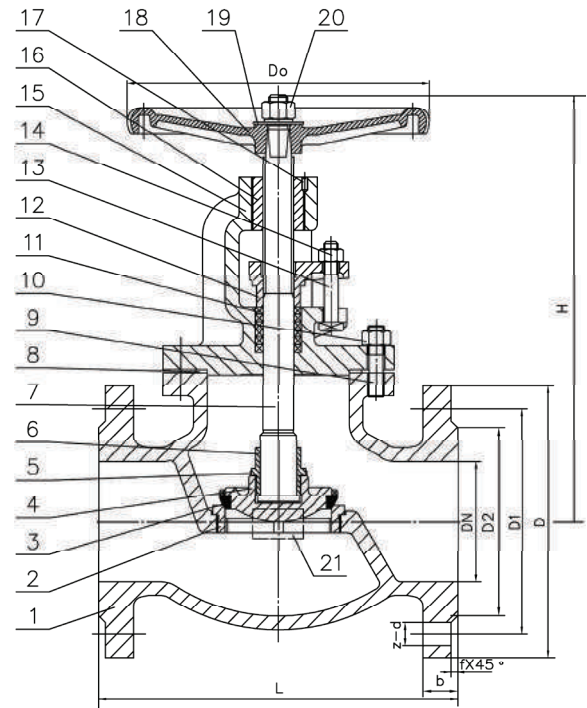
Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	13789	558-1	1092-2	12266-1
BS	5152	2080 Ser.10	4504-3.2	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 EN-JL1030
2. Seat	Bronze 1982 CC491K
3. Disc Ring	Bronze 1982 CC491K
4. Disc*	Cast Steel 10213-4 GP240GH
5. Retaining Washer	Stainless Steel 304SS
6. Disc Cover	Carbon Steel
7. Stem	Stainless Steel 10088-1 X6Cr13
8. Gasket	Graphite and Steel
9. Stud	Carbon Steel 10025-2 S235JR
10. Nut	Carbon Steel 10025-2 S235JR
11. Packing	Graphite
12. Gland Flange	Ductile Iron 1563 EN-JS1040
13. Square Bolt	Carbon Steel 10025-2 S235JR
14. Nut	Carbon Steel 10025-2 S235JR
15. Bonnet	Cast Iron 1561 EN-JL1030
16. Stem Nut	Brass
17. Screw	Carbon Steel 10025-2 S235JR
18. Handwheel	Cast Iron 1561 EN-JL1030
19. Washer	Carbon Steel 10025-2 S235JR
20. Nut	Carbon Steel 10025-2 S235JR
21. Name Plate	Aluminum

### Pressure Testing

Shell	24 Bar
Seat	17.6 Bar



**NPF 719**  
FLNG x FLNG

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)										Weight
In.	mm.	DN	L	D	D1	D2	b	z-d	f	H	Do	Kg
2	50	50	203	165	125	99	20	4-19	3	300	200	16
2½	65	65	216	185	145	118	20	4-19	3	309	200	20
3	80	80	241	200	160	132	22	8-19	3	330	200	26
4	100	100	292	220	180	156	24	8-19	3	356	250	42
5	125	125	330	250	210	184	26	8-19	3	393	300	70
6	150	150	356	285	240	211	26	8-23	3	436	300	80
8	200	200	495	340	295	266	30	12-23	3	488	360	135
10	250	250	622	405	355	319	32	12-28	3	560	450	215
12	300	300	698	460	410	370	32	12-28	4	656	500	318

\* NOTE: New disc ring per BSEN 13789:2010 "SEC.4.2.2.3. Globe valves may be used as regulating valves in which case they shall be supplied with a profiled obturator, e.g. parabolic or conical."

**FREEZING WEATHER CAUTION:** Subsequent to testing a piping system, valves should be left in an open position to allow complete drainage. Failure to follow these instructions may result in property damage.



## Ductile Iron Globe Valve (PN25)

OS&Y • Rising Stem • Bronze Trim • Flanged Ends • Bolted Bonnet

25 Bar (362.2 psi) / -10 to 120°C

17.5 Bar (253.8 psi) / 350°C

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	13789	558-1 PN25	1092-2 PN25	12266-1, 12266-2
BS	5152	2080 Ser.1 PN25	4504-3.2 PN25	6755-1

### MATERIAL LIST

PART	SPECIFICATION
1. Body	DI A536 65-45-12 1563 EN-JS 1030
2. Seat Ring	Bornze B62 C83600 1982 CC491K
3. Disc Seal Ring	Bornze B62 C83600 1982 CC491K
4. Disc	DI A536 65-45-12 1563 EN-JS 1030
5. Retaining Washer	St. St.
6. Disc Cover	CS Plate
7. Stem	13Cr 431SS 100881 X17CrNi16-2
8. Bonnet Gasket	Graphite+Steel
9. Stud	CS A307
10. Nut	CS A307
11. Packing	Graphite
12. Gland Flange	DI A536 65-45-12 1563 EN-JS 1030
13. Square Head Bolt	CS A307
14. Nut	CS A307
15. Bonnet	DI A536 65-45-12 1563 EN-JS 1030
16. Stem Nut	Bornze B62 C83600 1982 CC491K
17. Screw	CS A307
18. Handwheel	CI A126 Class B 1561 EN-JL 1030
19. Washer	CS Plate
20. Nut	CS Plate
21. Name Plate	Aluminium

### Pressure Testing

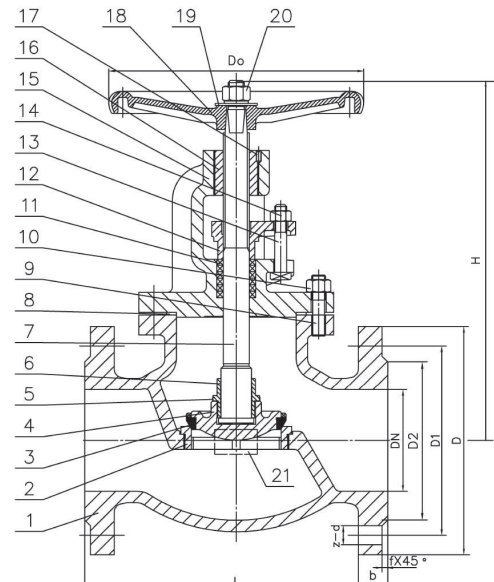
Shell	37.5 Bar
Seat	27.5 Bar

### DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)										Weight
In.	mm.	L	D	D1	D2	C	n-d	f	H	Do	Kg.	
2"	(50)	230	165	125	99	19	4-19	3	297	200	17	
2 1/2"	(65)	290	185	145	118	19	8-19	3	310	200	20	
3"	(80)	310	200	160	132	19	8-19	3	333	250	28	
4"	(100)	350	235	190	156	19	8-23	3	353	280	43	
5"	(125)	400	270	220	184	19	8-28	3	388	300	63	
6"	(150)	480	300	250	211	20	8-28	3	427	360	85	
8"	(200)	600	360	310	274	22	12-28	3	476	400	135	
10"	(250)	730	425	370	330	24.5	12-31	3	539	450	229	
12"	(300)	850	485	430	389	27.5	16-31	4	697	500	325	



**NPF 725**  
Flanged



**NPF 725**  
FLNG x FLNG

# Ductile Iron Double Regulating Balancing Valves (PN16)

Fixed Orifice • Two Test Ports • Flanged Ends • Size DN 65-450

**16 Bar/ -10 to 120°C**

**12.8 Bar / 200°C**

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN		BS EN 558 SER.1	BS EN 1092-2	
BS	7350	BS 2080 SER.1	BS 4504-3.2	6755-1

## MATERIAL LIST

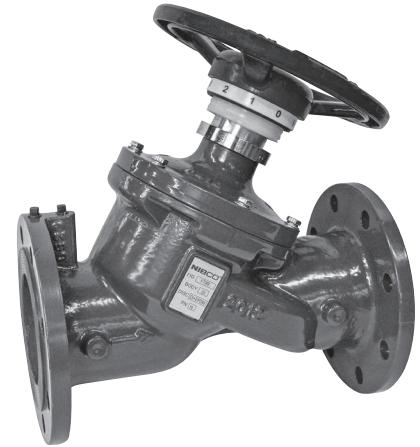
PART	SPECIFICATION
1. Body	Ductile Iron 1563 EN-JS1040
2. Seal Gasket	EPDM
3. Disc	Ductile Iron w/EPDM coated 1563 EN-JS1040
4. Stem Nut	Brass 12165 CW617N
5. Stem	S.S. 410 BS970 410S21
6. Bonnet	Ductile Iron 1563 EN-JS1040
7. Stem Lock Bushing	Brass 12165 CW617N
8. Limit Set of Indicator	S.S. 304 BS970 304S15
9. Oriented Set of Indicator	Brass 12165 CW617N
10. Directed Circle	ABS
11. Indicator	ABS
12. Packing	EPDM
13. Handwheel	Ductile Iron 1563 EN-JS1040
14. Plug	Steel
15. Orifice Insert	Stainless Steel 304 BS970 304S15
16. Bolt	S.S. 304 BS970 304S15
17. Gasket	S.S. 304 BS970 304S15
18. Hex. Socket Screw	S.S. 304 BS970 304S15
19. Bolt	S.S. 304 BS970 304S15
20. Spring Gasket	S.S. 304 BS970 304S15
21. Indicator Dust Cover	ABS
22. Packing Gland	Brass (DN65-DN150) 12165 CW617N or Ductile Iron (DN200-450) EN-JS1040
23. Packing	PTFE
24. Spring Washer	S.S. 304 BS970 304S15

### Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

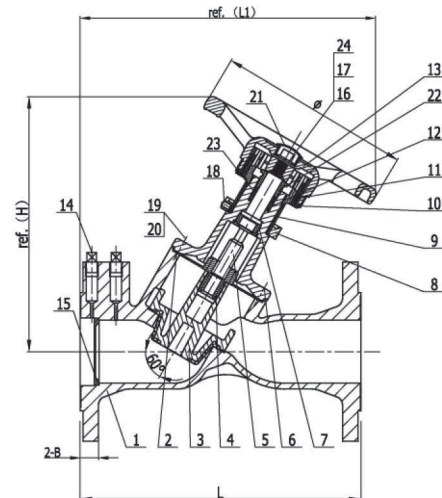
## DIMENSIONS—WEIGHTS

SIZE			Dimensions mm							
In.	DN.	In.	H	L	L1	B	Ø	Kvs	Handwheel No. of Turns	Wt.
2½	65	2½	265	290	310	19	200	104	8	17
3	80	3	270	310	320	19	200	112	8	20
4	100	4	310	350	360	19	240	162	8	29
5	125	5	340	400	415	19	290	254	8	40
6	150	6	340	480	445	19	290	335	8	52
8	200	8	537	600	620	20	350	535	12	113
10	250	10	570	730	720	22	420	1099	12	185
12	300	12	690	850	875	24.5	420	1588	18	248
14	350	14	685	980	930	26.5	420	1885	18	410
16	400	16	970	1100	1220	28	640	2334	24	550
18	450	18	975	1200	1280	30	640	2981	24	690



**NPF 738**

Flanged



**NPF 738**  
FLNG x FLNG

Note: In accordance with BS7350, the accuracy of flow measurement is  $\pm 5\%$  at all open positions of the double regulating valves.

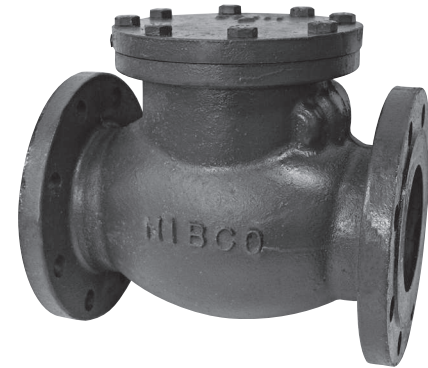
# Cast Iron Swing Check Valve (PN16)

Bolted Bonnet • Horizontal Swing • Bronze Trim • Flanged Trim

16 Bar from -10°C to 120°C

12.8 Bar 200°C

Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	12334	558-1	1092-2	12266-1
BS	5153	2080 Ser. 10/5153	4504 Sec.3.2	6755-1,5153

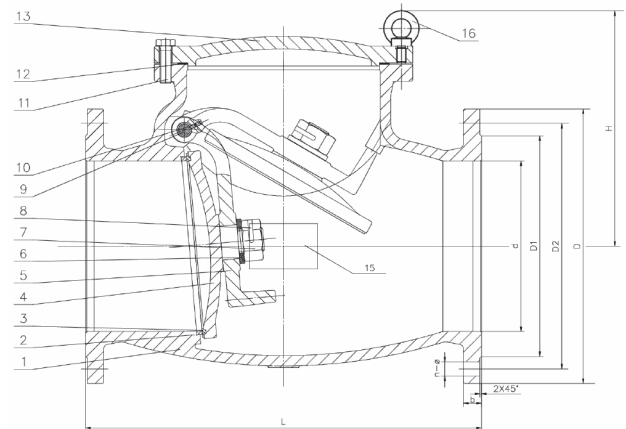


**NPF 938**

Flanged

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 GJL-200
2. Seat	Bronze 1982 CC491K
3. Disc Ring	Bronze 1982 CC491K
4. Disc	Cast Iron 1561 GJL-200
5. Hinge	Carbon Steel 10087
6. Washer	Steel 10025-2 S235JR
7. Nut	Steel 10025-2 S235JR
8. Pin	S.S. 304 10088-1 X5CrNi18-10
9. Hinge Pin	S.S. 304 10088-1 X6Cr13
10. Set Screw	Steel 10025-2 S235JR
11. Bolt	Steel 10025-2 S235JR
12. Gasket	Graphite+Steel
13. Bonnet	Cast Iron 1561 GJL-200
*14. Plug	Malleable Iron 1561 GJMB-300-6
15. Nameplate	Aluminum
16. Eyebolt	Steel 10025-2 S235JR



**NPF 938**  
FLNG x FLNG

Option: With lever & weight on request.

## Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)							Weight	
In.	mm.	d	L	D	D1	D2	b	n-Ø	H	Kg.
2"	50	50	203	165	125	99	20	4-19	117	10
2 1/2"	65	63.5	216	185	145	118	20	4-19	127	14
3"	80	78	241	200	160	132	22	8-19	145	19
4"	100	100	292	220	180	156	24	8-19	161	32
5"	125	125	330	250	210	184	26	8-19	190	45
6"	150	150	356	285	240	211	26	8-23	248	59
8"	200	200	495	340	295	266	30	12-23	303	107
10"	250	250	622	405	355	319	32	12-28	365	158
12"	300	300	698	460	410	370	32	12-28	410	246
14"	350	356	787	520	470	429	36	16-28	590	500
16"	400	406	914	580	525	480	38	16-31	608	680
18"	450	457	914	640	585	548	40	20-31	698	780
20"	500	508	1016	715	650	609	42	20-34	742	1000
24"	600	610	1219	840	770	720	48	20-37	844	1600

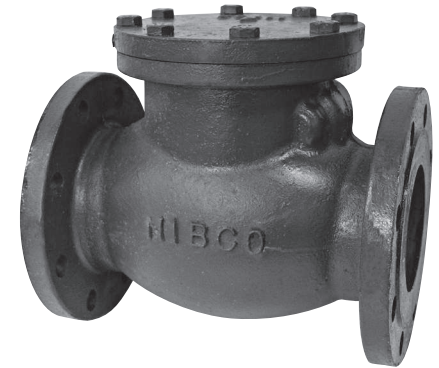
- On pump discharge, the preferred check valves are in-line spring loaded, swing design with lever and weight or lever and spring. Install the check valve a minimum of 5 times the pipe diameter.
- Do not use for reciprocating air compressor service.
- Iron body check valves may be installed in horizontal and vertical lines with upward flow or in any intermediate position.
- This valve complies with BSEN 12334:01 SEC.4.2.4 Anti-blow out design. The valve designs shall ensure that the hinge pin mechanism cannot be fully blown out of the body when the valve is under pressure.

# Ductile Iron Swing Check Valve (PN25)

Bolted Bonnet • Horizontal Swing • Bronze Trim  
• Flanged Ends

**25 Bar (362.2 psi)/ -10 to 120°C**

**17.5 Bar (253.8 psi) / 350°C**



**NPF 940**  
Flanged

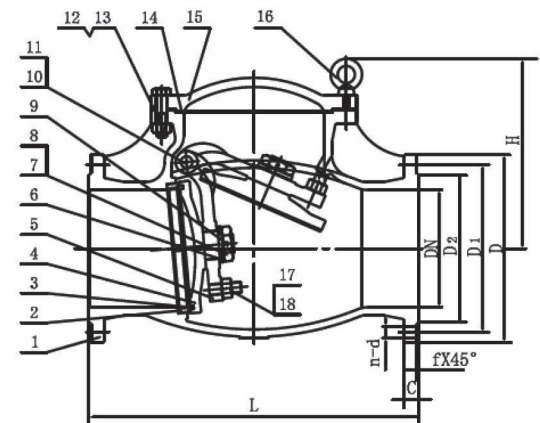
Standards	Valve	Face-to-Face	Flanges	Testings
BS EN	12334	558-1 Ser.1 PN25	1092-2 PN25	12266-1, 12266-2
BS	5153	2080 Ser.1 PN25	4504-3.2 PN25	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	DI A536 65-45-12 1563 EN-JS 1030
2. Seat Ring	Bornze B62 C83600 1982 CC491K
3. Disc Seal Ring	Bornze B62 C83600 1982 CC491K
4. Disc	DI A536 65-45-12 1563 EN-JS 1030
5. Hinge	WCB A216 10213-4 GP240GH
6. Washer	CS Plate
7. Nut	CS A307
8. Stud	CS A307
9. Split Pin	A276-304 100881-1 X10CrNi18-10
10. Hinge Pin	A276-431 100881-1 X17CrNi16-2
11. Plug	DI A536 65-45-12 1563 EN-JS 1030
12. Bolt	CS A307
13. Nut	CS A307
14. Bonnet Gasket	Graphite+Steel
15. Bonnet	DI A536 65-45-12 1563 EN-JS 1030
16. Eye Screw	CS A307
17. Adjustable Screw	CS A307
18. Nut	CS A307

## Pressure Testing

Shell	37.5 Bar
Seat	27.5 Bar



**NPF940**  
FLNG x FLNG

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)							Weight	
In.	mm.	L	D	D1	D2	C	n-d	f	H	Kg.
2"	(50)	230	165	125	99	19	4-19	3	153	10
2 1/2"	(65)	290	185	145	118	19	8-19	3	162	14
3"	(80)	310	200	160	132	19	8-19	3	176	19
4"	(100)	350	235	190	156	19	8-23	3	220	33
5"	(125)	400	270	220	184	19	8-28	3	226	46
6"	(150)	480	300	250	211	20	8-28	3	256	60
8"	(200)	600	360	310	274	22	12-28	3	298	109
10"	(250)	730	425	370	330	24.5	12-31	3	376	173
12"	(300)	850	485	430	389	27.5	16-31	4	410	248

Note: 10" & 12" with eye bolt installed.

Option: Stainless steel Trim. Lever & Weight operated.

# Cast Iron Silent Check Valve (PN16)

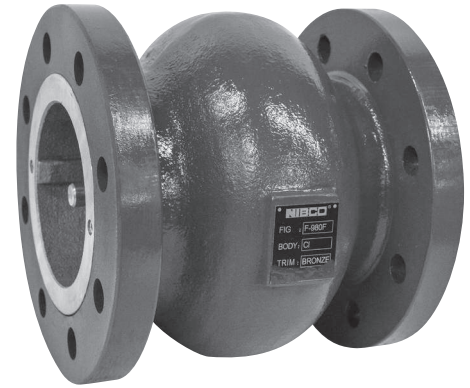
Renewable Metal Seats and Disc • Globe Style • Spring Actuated

16 bar from -10°C to 100°

FLANGE DIMENSIONS BSEN 1092-2 •  
FLANGE DRILLED TO BS 4504

## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 ENJL 1030
2. Bushing	Stainless Steel 304 BSEN 10088-1
3. Spring	Stainless Steel 316 BSEN 10088-1
4. Guide Disc	Bronze 1982 CC491K
5. Seat	Bronze 1982 CC491K
6. Stem	Stainless Steel 316 BSEN 10088-1



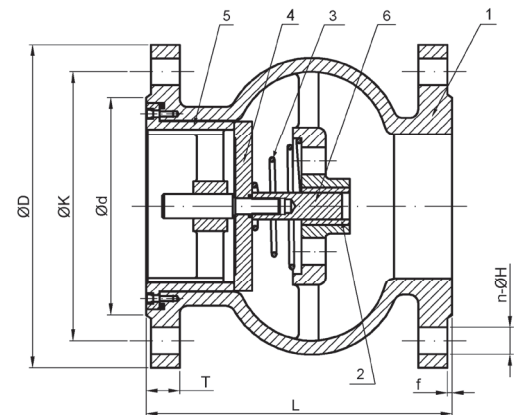
**NPF 980**  
Flanged

## Pressure Testing

Shell	24 Bar
Seat	17.6 Bar

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)							Weight
In.	mm.	ØD	n-ØH	ØK	L	Ød	T	f	Kg.
2"	50	165	4-19	125	159	99	20	3	14.5
2½"	65	185	4-19	145	178	118	20	3	18
3"	80	200	8-19	160	190.5	132	22	3	24.5
4"	100	220	8-19	180	216	156	24	3	40.5
5"	125	250	8-19	210	241.5	184	26	3	53
6"	150	285	8-23	240	267	211	26	3	68.5
8"	200	340	12-23	295	343	266	30	3	114
10"	250	405	12-28	355	413	319	32	3	185
12"	300	460	12-28	410	514	370	32	4	296
14"	350	520	16-28	470	578	429	36	4	435
16"	400	580	16-31	525	629	480	38	4	545
18"	450	640	20-31	585	571	548	40	4	642
20"	500	715	20-34	650	610	609	42	4	750
24"	600	840	20-37	770	610	720	48	5	892



**NPF 980**  
FLNG x FLNG

USE THIS VALVE ONLY WITH FLAT FACE FLANGE AND FULL FACE BASKET.

### WARNING:

1. Seal end of valve must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
2. These are not to be used as steam valves. Failure to follow this warning could result in personal injury or property damage.
3. Valves are not to be used near a reciprocating air compressor.
4. Install 5 pipe diameters minimum downstream from pump discharge or elbows to avoid flow turbulence. Flow straightener may be required in extreme cases.

**NOTE:** On pump discharge, the preferred check valves are in-line spring loaded, swing design with lever and weight or lever and spring.

# Cast Iron Silent Check Valve (PN16)

- Renewable Seat and Disc • Wafer Style • Spring Actuated
- Drilling/Tapping per ANSI Class 125

**Class 125, 200psi/13.8 bar non-shock cold working pressure**  
**Maximum temperature to 200°F/93°C**

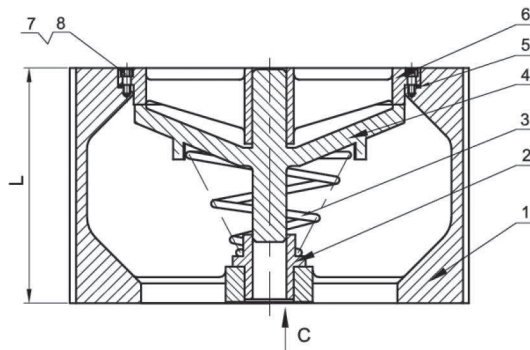
## MATERIAL LIST

PART	SPECIFICATION
1. Body	Cast Iron 1561 EN-JL1030
2. Bushing	Brass 1982 CC491K
3. Spring	Stainless Steel 316 10088-1
4. Disc	Bronze 1982 CC491K
5. O-Ring	NBR
6. Seat	Bronze 1982 CC491K
7. O-Ring	NBR
8. Screw	Stainless Steel 304 10088-1



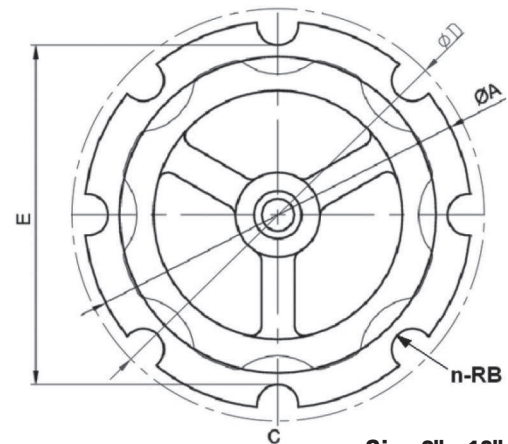
**NPW980**

## NPW980 Metal Seat



### Pressure Testing

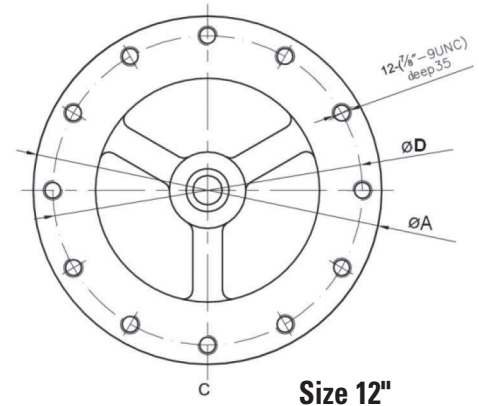
Shell	300 psi
Seat	220 psi



**Size 2" - 10"**

## DIMENSIONS—WEIGHTS

SIZE	Dimensions (mm)							Weight Kg.
	In.	mm.	ØA	n-RB	ØD	L	E	
2"	50	108	4-R8	120.70	67	100	3	
2½"	65	127	4-R8	139.70	73	121	4	
3"	80	146	4-R8	152.40	79	133	6	
4"	100	178	8-R8	190.50	102	171	10	
5"	125	222	8-R9.6	215.90	118	191	15	
6"	150	248	8-R9.6	241.30	141	220	20	
8"	200	343	8-R11	298.50	165	276	40	
10"	250	406	8-R12	362.00	210	337	90	
12"	300	485.8	12-7/8UNC	431.80	285.8	--	150	



**NPW980**

**Size 12"**

USE THIS VALVE ONLY WITH FLAT FACE FLANGE AND FULL FACE BASKET.

### WARNING:

1. Seal end of valve must be mated to a standard flat faced metal flange. Rubber flanges not acceptable.
2. These are not to be used as steam valves. Failure to follow this warning could result in personal injury or property damage.
3. Valves are not to be used near a reciprocating air compressor.
4. Install 5 pipe diameters minimum downstream from pump discharge or elbows to avoid flow turbulence. Flow straightener may be required in extreme cases.

**NOTE:** On pump discharge, the preferred check valves are in-line spring loaded, swing design with lever and weight or lever and spring.

# Cast Iron Strainer (PN16)

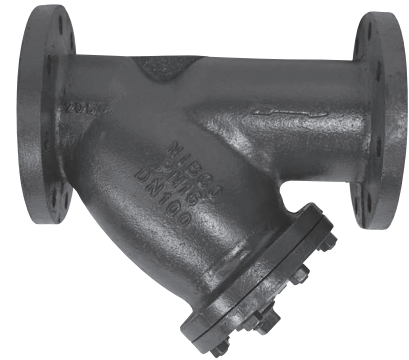
Y-Pattern • Stainless Steel Screen • Bolted Cover • Drain Plug

16 bar from -10°C to 100°

Standards	Flanges	Testings
BS EN	1092-2	12266-1
BS	4504-3.2	6755-1

## MATERIAL LIST

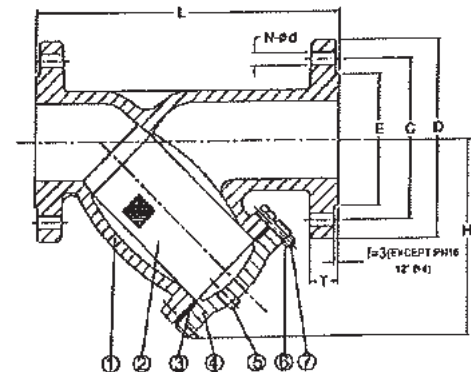
PART	SPECIFICATION
1. Body	Cast Iron 1561 EN JL 1030
2. Screen	Stainless Steel BSEN 10088-2 1.4301, 304SS
3. Gasket	Graphite With Soft Steel
4. Cover	Cast Iron 1561 EN JL 1030
5. Drain Plug	Malleable Iron 1562 EN JM 1110
6. Nut	Carbon Steel BSEN 10087
7. Bolt	Carbon Steel BSEN 10087



**NPF 1000**  
Flanged

### Pressure Testing

Shell	24 Bar
-------	--------



**NPF 1000**  
FLNG x FLNG

## DIMENSIONS—WEIGHTS

SIZE		Dimensions (mm)							Weight	
In.	mm.	L	D	C	E	T	N-Ød	H	Kg.	
2"	50	220	165	125	99	20	4-19	174	11.5	
2½"	65	270	185	145	118	20	4-19	171	14	
3"	80	290	200	160	132	22	8-19	189	20	
4"	100	350	220	180	156	24	8-19	232	30	
5"	125	390	250	210	184	26	8-19	285	43	
6"	150	440	285	240	211	26	8-23	309	58	
8"	200	540	340	295	266	30	12-23	397	106	
10"	250	660	405	355	319	32	12-28	479	174	
12"	300	720	460	410	370	32	12-28	557	276	
14"	350	949	520	470	429	36	16-28	648	421	
16"	400	1079	580	525	480	38	16-31	752	605	
18"	450	1150	640	585	548	40	20-31	826	740	
20"	500	1275	715	650	609	42	20-34	860	770	
24"	600	1450	840	770	720	48	20-37	1020	1030	

# Ductile Iron Y-Pattern Strainer (PN25)

Stainless Steel Screen • Flanged Ends • Bolted Cover • Drain Plug

25 Bar (362.2 psi) / -10 to 120°C

17.5 Bar (253.8 psi) / 350°C

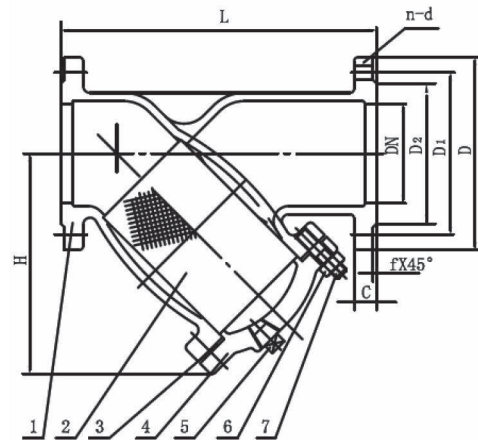
Standards	Flanges	Testing
BS EN	1092-2 PN25	12266-1, 12266-2
BS	4504-3.2 PN25	6755-1

## MATERIAL LIST

PART	SPECIFICATION
1. Body	DI A536 65-45-12 1563 EN-JS 1030
2. Screen	304 SS Plate
3. Gasket	Graphite+Steel
4. Cover	DI A536 65-45-12 1563 EN-JS 1030
5. Plug	MI A47 32510 1562 EN-JM 1130
6. Nut	CS A307
7. Stud	CS A307



**NPF 1025**  
Flanged



**NPF1025**  
FLNG x FLNG

## Pressure Testing

Shell	37.5 Bar
Seat	27.5 Bar

## DIMENSIONS

SIZE		Dimensions (mm)							
In.	mm.	L	D	D1	D2	C	n-d	f	H
2"	(50)	220	165	125	99	20	4-19	3	182
2 1/2"	(65)	270	185	145	118	20	8-19	3	188
3"	(80)	290	200	160	132	22	8-19	3	195
4"	(100)	350	235	190	156	24	8-23	3	246
5"	(125)	390	270	220	184	26	8-28	3	302
6"	(150)	440	300	250	211	26	8-28	3	320
8"	(200)	540	360	310	274	30	12-28	3	397
10"	(250)	660	425	370	330	32	12-31	3	483
12"	(300)	720	485	430	389	32	16-31	4	560

Note: • In BS&BSEN standards, do not have strainer specifications, but manufacturer's specifications.  
• Blow off outlet supply with NPT or BSPT plug is available.



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# Cv & Kv values for Cast Iron Flanged Valves

FLOW RATE-g.p.m

## CI GATE VALVE — NPF613

S	2"	2	3"	4"	5"	6"	8"	10"	12"
Cv	210	232	505	950	1520	2255	4152	6705	9930
Kv	182	201	437	822	1315	1951	3592	5800	8590

## CI GLOBE VALVE — NPF719

S	2"	2	3"	4"	5"	6"	8"	10"	12"
Cv	42	68	100	190	310	458	852	1375	-
Kv	36	59	87	164	268	396	737	1189	-

## CI CHECK VALVE — NPF938

S	2"	2	3"	4"	5"	6"	8"	10"	12"
Cv	131	192	297	526	852	1270	2276	3588	5340
Kv	113	166	257	455	737	1099	1969	3104	4619

## CI Y STRAINER — NPF1000-Y

S	2"	2	3"	4"	5"	6"	8"	10"	12"
Cv	67	111	164	267	387	560	933	1667	2286
Kv	58	96	142	231	335	484	807	1442	1978

## CI FLANGED TYPE SILENT CHECK VALVE — NPF980

S	2"	2	3"	4"	5"	6"	8"	10"	12"
Cv	58	93	136	223	310	443	750	1270	-
Kv	50	80	118	193	268	383	649	1099	-

NOTE:Kv=Cv/1.156

## Cv Flow Data for WDB-1000 Butterfly Valves

Valve Size		Cv Value when valve in different opening angle								
Inch	mm	10°	20°	30°	40°	50°	60°	70°	80°	90°
1 ½	40	0.06	3	7	14	25	36	51	70	76
2	50	0.1	5	12	24	45	64	90	125	135
2 ½	65	0.2	8	20	37	65	98	144	204	220
3	80	0.3	12	22	39	70	116	183	275	302
4	100	0.5	17	36	78	139	230	364	546	600
5	125	0.8	29	61	133	237	392	620	930	1022
6	150	2	45	95	205	366	605	958	1437	1579
8	200	3	89	188	408	727	1202	1903	2854	3136
10	250	4	151	320	694	1237	2047	3240	4859	5340
12	300	5	234	495	1072	1911	3162	5005	7507	8250
14	350	6	338	715	1549	2761	4568	7230	10844	11917
16	400	8	464	983	2130	3797	6282	9942	14913	16388
18	450	11	615	1302	2822	5028	8320	13168	19752	21705
20	500	14	791	1674	3628	6465	10698	16931	25396	27908
22	550	17	965	2042	4426	7887	13052	20655	30983	34048
24	600	22	1222	2587	5605	9989	16528	26157	39236	43116
26	650	26	1434	3036	6578	11723	19397	29263	46047	50600
28	700	30	1663	3522	7630	12599	20036	30482	46899	58696
30	750	35	1912	4050	8142	13152	20411	31226	47562	63328
32	800	45	2387	4791	8736	13788	20613	31395	48117	68250
34	850	51	2697	5414	9872	15580	23293	35476	54372	77123
36	900	60	3021	6063	11055	17449	26086	39731	60895	86375
40	1000	84	4183	8395	15307	24159	36166	55084	84425	119750
42	1050	93	4601	9235	16838	26575	39783	60592	92868	131725
48	1200	121	5981	12001	21890	34548	51718	78770	120728	171243

## WDB-1000 PN16 Butterfly Valves Torque Data

VALVE SIZE		PN16	
inch	mm	In-Lbs	N-M
2"	50	124	14
2½"	65	180	20.3
3"	80	240	27.1
4"	100	440	49.7
5"	125	750	84.7
6"	150	1100	124.2
8"	200	2100	237.1
10"	250	3700	417.7
12"	300	5900	666.1
14"	350	8580	968.7
16"	400	11566	1305.8
18"	450	15819	1786
20"	500	20425	2285.7
24"	600	32840	3707.6

**Remark:**

The above data is the actual operating torque without any safety factor. If calculating with actuator, it is recommended a 30% safety factor be added to the above values.

# Flange Dimensions

## Nominal Size 15mm (1/2 in)

BS EN 1092	Diameter of flange	Bolt circle diameter	Number of bolts	Diameter of bolts	Diameter of holes	Diameter of raised face(3) iron	Diameter of raised face(3) steel	Height of raised face(3)	Thickness of flange			
									Grey case iron	Copper alloy	Cast and forged Steel	Ductile cast iron
PN 6	80	55	4	M10	11	38	40	2	12(1)	-	12	-
PN 10	95	65	4	M12	14	46	45	2	14 (1)	-	16	14
PN 16	95	65	4	M12	14	46	45	2	14 (1)	6 (2)	16	14
PN 25	95	65	4	M12	14	46	45	2	16 (1)	8 (2)	16	14
PN 40	95	65	4	M12	14	46	45	2	-	9 (2)	16	16
PN 64	105	75	4	M12	14	-	45	2	-	-	20	-

### ANSI

Class 125/150	3½ (89)	2¾ (60)	4	½ (13)	⅝ (16)	-	1⅜ (35)	⅛ (2)	-	5/16 (8)	7/16 (11)	-
Class 300	3¾ (95)	2⅝ (67)	4	½ (13)	⅝ (16)	-	1⅜ (35)	⅛ (2)	-	½ (13)	½ (13)	-
Class 600	3¾ (95)	2⅝ (67)	4	½ (13)	⅝ (16)	-	1⅜ (35)	¼ (6)	-	-	⅝ (14)	-
Class 900	4¾ (121)	3¼ (83)	4	¾ (19)	⅞ (22)	-	1⅜ (35)	¼ (6)	-	-	⅞ (22)	-
Class 1500	4¾ (121)	3¼ (83)	4	¾ (19)	⅞ (22)	-	1⅜ (35)	¼ (6)	-	-	⅞ (22)	-

### BS 10

Table A	3¾ (95)	2⅝ (67)	4	½ (13)	⅞ (14)	-	-	-	½ (13)	¼ (6)	-
Table D	3¾ (95)	2⅝ (67)	4	½ (13)	⅞ (14)	-	-	-	½ (13)	¼ (6)	⅜ (10)
Table E	3¾ (95)	2⅝ (67)	4	½ (13)	⅞ (14)	-	-	-	½ (13)	¼ (6)	⅜ (10)
Table F	3¾ (95)	2⅝ (67)	4	½ (13)	⅞ (14)	-	-	-	½ (13)	⅝ (8)	⅜ (10)
Table H	4½ (114)	31/4 (83)	4	⅝ (16)	1⅛ (17)	-	21/4 (57)	⅛ (2)	⅝ (16)	⅜ (10)	½ (13)

(1) These flange thicknesses are also valid for ductile iron flanges type 21-2

(2) Flange thicknesses for copper alloy are from BS4504

(3) Copper alloy flanges are always flat-faced

# Cross Reference Table for BS-EN Standards, Metrication in the UK Valve Industry and Imperial Valve Standards

NEW BS-EN STANDARD		METRICATION IN THE UK VALVE INDUSTRY		IMPERIAL VALVE STANDARDS	
New Metric Standard	Title	Superseded Old Metric Standard	Title	Superseded Old Metric Standard	Title
BSEN 1171-02	Industrial Valves – Cast Iron Gate Valves	BS5150 : (74) 90	Cast Iron Gate Valves	BS1735 : 66	Flanged CI outside-screw-and Yoke Wedge Gate Valve Class 125, Size 1 ½" to 24" for petroleum industry
		BS5151 : (74) 91	Cast Iron Gate (parallel slide) Valves for general purposes	BS3464 : 65	CI Wedge & Double Disk Gate Valve for general purpose
				BS3948 : 65	CI Parallel Slide valve for general Purpose
BSEN 13789-10	Industrial Valves – Cast Iron Globe Valves	BS5152 : (74) 91	Cast Iron Globe and Globe Stop and Check Valves for general purposes	BS3961 : 65	CI Screw-down Stop Valve, Stop and Check valves for Gen. Purposes
BSEN 12334-01/ A1:04	Industrial Valves – Cast Iron Check Valves	BS5153 : (74) 91	CI Check Valves for general purpose	BS4090 : 66	CI Check Valve for general purpose
BSEN 12288-10	Industrial valves. Copper alloy gate valves	BS5154 : 91	Copper Alloy Globe, Globe Stop and Check, Check and Gate Valves – (Including Parallel Slide type)	BS1952 : 64	Copper Alloy Gate Valve for general purpose
BSEN 12360 **	Copper Alloy Globe Valves			BS1953 : 64	Copper Alloy check Valve for general purpose
BSEN 12328 **	Copper Alloy Check Valves			BS2060 : 64	Copper Alloy Screw-down Stop valve for general purpose
BSEN 593 : 09/ A1:11	Industrial Valves – Metallic Butterfly Valves	BS5155 : (84) 91	Butterfly Valves	BS3952 : 65	CI Butterfly valve for Gen. Purpose
BSEN 13397-02	Industrial valves, Diaphragm Valves made of metallic materials	BS5156 : (85) 90	Diaphragm Valves	*	
BSEN 1984-10	Industrial Valves, Steel Gate Valves	BS5157 : 89	Steel Gate (parallel slide) Valves	BS4133 : 67	Flanged Steel Parallel Slide valves for Gen. Purposes
BSEN 12335 ** BSEN 12304 **	Cast Iron Plug Valves Steel Plug Valves	BS5158 : (74) 89	Cast Iron Plug Valves	*	
BSEN 1983-13 **	Industrial Valves, Steel Ball Valves	BS5159 : (74) 91	CI and CS Ball Valves for Gen. Purpose	*	
BSEN 1074-1:00	Valves for water supply – Fitness for purpose requirements and appropriate verification test – part 1 : General requirements	BS5163 : (74) 86	Predominantly Key-Operated Cast Iron Gate Valve for Waterworks Purposes	BS1218 : 46	Sluice valve for Waterworks Purpose
BSEN 1074-2:00/ A1:04	Valves for water supply – Fitness for purpose requirements and appropriate verification test – part 2 : Isolating valves	<b>NOTE:</b> *There are no existing imperial standards for these valves **These standard are not yet published and still in draft form out for public comment.			
BSEN 1074-3:00	Valves for water supply – Fitness for purpose requirements and appropriate verification test – Check valve				
BSEN 1074-4:00	Valves for water supply – Fitness for purpose requirements and appropriate verification test – Air valve				
BSEN 1074-5:01	Valves for water supply – Fitness for purpose requirements and appropriate verification test – Control valve				
BSEN 1074-6:08 **	Valves for water supply – Fitness for purpose requirements and appropriate verification test – Hydrants				

# Cross Reference Table on Valve Component Materials

## Valve Component Material Specifications

MATERIAL	BS	ASTM	DIN	BS EN	COMPONENT NAME
CAST IRON	1452 GR220	A126 CL.B	1691 GG22	1561 EN-JL 1040	BODY, BONNET, COVER GLAND, WEDGE HAND WHEEL DISC, STUFFING BOX
DUCTILE IRON	2789 GR420-12 2789 GR500-7 2789 GR600-3 2789 GR700-2 2789 GR800-2	A536 604018 A536 654512 A536 80-55-06 A536 100-70-03 A536 120-90-02	1693 GGG40 1693 GGG50 1693 GGG60 1693 GGG70 1693 GGG80	1563 ENJS 1020 1563 ENJS 1050 1563 ENJS 1060 1563 ENJS 1070 1563 ENJS 1080	
CAST STEEL	1504-161 GR 480	A216 GR WCB	17245 GSC25	10213-2 GP 240 GH	
BRONZE (GUNMETAL)	1400 LG2 1400 LG1	B62 C83600 B584 C84400	1705 G-CuSn5ZnPb 1705 G-CuSn3Zn8Pb5	1982 CC491K 1982 CC490K	
FORGE BRASS	2872-CZ122	B124 C37700	CuZn40Pb2	12165 CW617N	BODY, END CAP, BALL, COMP. NUT
BRASS	2874-CZ124 2874-CZ121	B16 C36000 B455-C38500	17660 CuZn39Pb3 17660 CuZn39Pb3	12164 CW603N 12164 CW614N	STEM, STEM NUT, END CAP, COMP. NUT
H.T. BRASS	2874-CZ114	B138-C67500	17660 CuZn40A1 17660 C67800 17660 CuZn39AlFeMn	12164 CW614N 12164 CW617N 12164 CW721R	STEM, STEM NUT STEM STEM, STEM NUT
ALUM. BRONZE	2874-CA104 1400 AB2	B150 C63000 B148 C95500, C95300	1714 G-CuAl10Fe5Ni5	1982 cc333G	STEM STEM, DISC, BFV DISC
MANGANESE BRONZE	2874-CZ116		1709 CuZn34A15	12164 CW721R 12163 CW705R	STEM STEM
STAINLESS STEEL	1502 S31600 970-316S31 970-316S11 970-304 S15 970-431S29	A182 F316 A276 SS316 A276 SS316L A276 SS304 A276 SS431 A351 CF8M	17440 X5CrNiMo1812 17440 X5CrNiMo 17-12-2 17440 X2CrNiMo 18-10 17441 X5CrNi18-10 17442 X22CrNi17	10088-1 X5CrNiMo 17-12-2 10088-1 X5CrNiMo 17-12-2 10088-1 X2CrNiMo 17-13-2 10088-1 X5CrNi18-10 10088-1 X5CrNi16-2 10213-4 GX5CrNiMo19-11-2 12073 XCrNiMn23-12-2	STEM STEM STEM STEM DISC, SEAT RING, BFD DISC BODY SEAT
STEEL	970-070 M20	A20 GR1021	17200 C22		
DZR METAL	2874-CZ132 2872-CZ132	C35330		12164 CW602N 12165 CW602N	BODY, END CAP, BALL BODY, END CAP, BALL
13% Cr SS	3100 420C29		17445 G-X12Cr14		STEM
STEEL				10028-2 P265GH	BOTTOM CAP
STEEL	970-220 M07	A151 C1213	1.0715	10087 11SM30	
SCREEN, STAINLESS STEEL	1449-304S15	AISI 304	17440 X2CrNi18-10	10088-1 X10CrNi18-10	STRAINER SCREEN
Chrome-Vanadium Steel	970-735 A50			10088-3 -1 51CrV4	SPRING FOR SAFETY VALVE
BRASS				12164-CW602N 12164-CW602N	COMPRESSION OLIVE COMPRESSION ADAPTOR

# NOTES



# NOTES



**NIBCO INC. 125% LIMITED WARRANTY**  
Applicable to NIBCO INC. Pressure Rated Metal Valves

NIBCO INC. warrants each NIBCO® pressure rated metal valve to be free from defects in materials and workmanship under normal use and service for a period of five (5) years from date put into service.

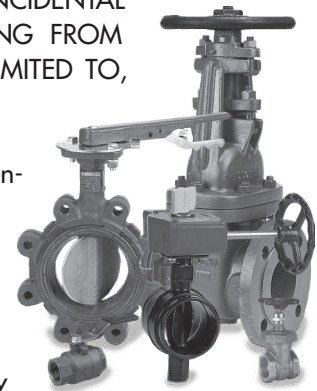
In the event any defect occurs which the owner believes is covered by this warranty, the owner should immediately contact NIBCO Technical Services, either in writing or by telephone at 1.888.446.4226 or 1.574.295.3000. The owner will be instructed to return said product, at the owner's expense, to NIBCO INC., or an authorized representative for inspection. In the event said inspection discloses to the satisfaction of NIBCO INC. that said valve is defective, it will be replaced at the expense of NIBCO INC.. Replacements shall be shipped free of charge to the owner. In the event of the replacement of any valve, NIBCO INC. shall further pay the owner the greater of twenty-five (25%) percent of the price of the valve according to the published suggested list price schedule of NIBCO INC. in effect at the time of purchase, or ten (\$10.00) dollars, to apply on the cost of the installation of said replacement valve.

TO THE EXTENT PERMITTED BY LAW, THIS WARRANTY SPECIFICALLY EXCLUDES INCIDENTAL AND CONSEQUENTIAL DAMAGES OF EVERY TYPE AND DESCRIPTION RESULTING FROM ANY CLAIMED DEFECT IN MATERIAL OR WORKMANSHIP, INCLUDING BUT NOT LIMITED TO, PERSONAL INJURIES AND PROPERTY DAMAGES.

Some states or countries do not allow the exclusion or limitation of incidental or consequential damages so these limitations may not apply to you.

TO THE EXTENT PERMITTED BY LAW, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and country to country.



## how to order

State quantity, figure number and size for each valve you wish to order. See individual valve catalog pages for specific or special product designations.

### HOW MANY TO ORDER

NIBCO® valves are decimal packed for your convenience in handling, shipping and stock-keeping. Number in master carton varies with item.

### POLICY ON RETURNS TO FACTORY

NO NIBCO valves are to be returned without prior written agreement. Transportation must be prepaid. A 20% charge will be made to cover cost of rehandling and reinspection.

### TECHNICAL ASSISTANCE

Engineers, contractors, wholesalers or manufacturers may obtain special or technical assistance from any factory representative of NIBCO. Write, fax or phone.

NIBCO INC.  
World Headquarters  
1516 Middlebury Street  
Elkhart, IN 46516-4740  
USA

Phone: 1.574.295.3000

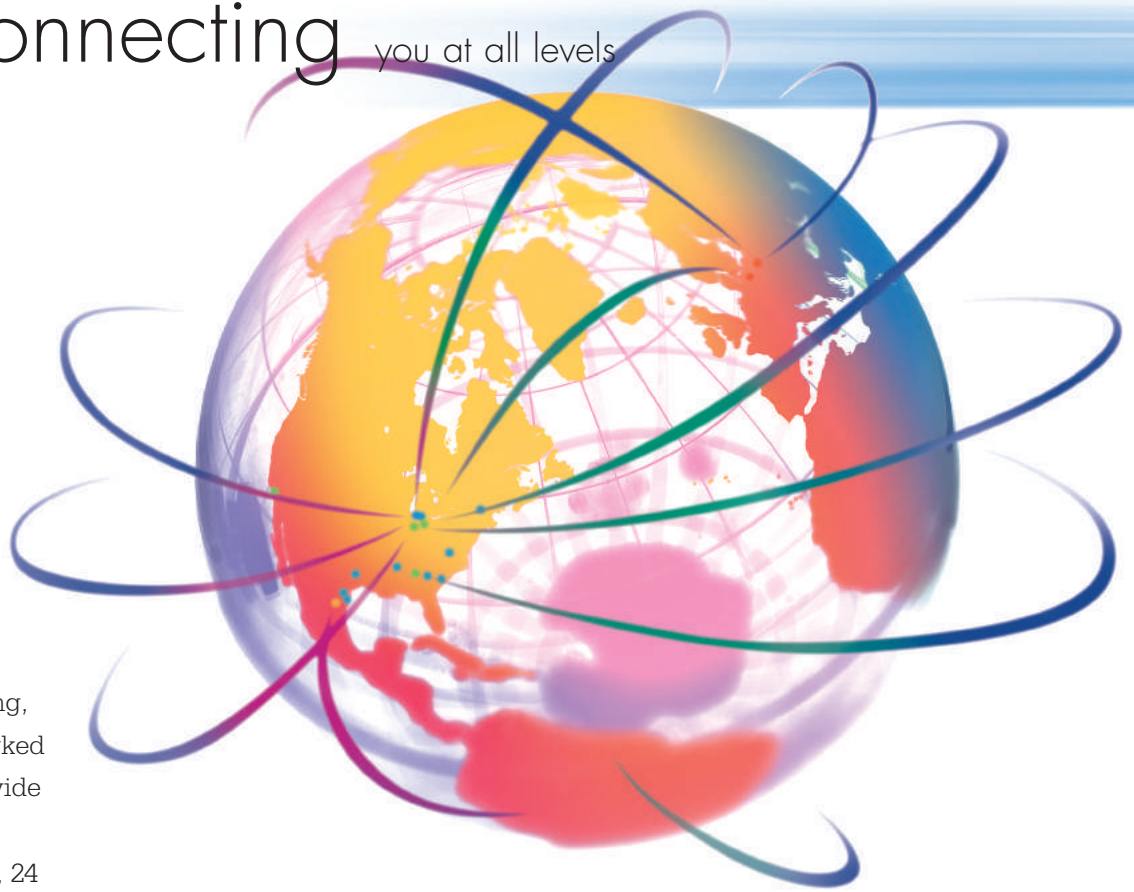
Fax: 1.574.295.3307

Technical Service Phone: 1.888.446.4226

Fax: 1.888.336.4226

To the best of our knowledge the information contained in this publication is accurate. However, NIBCO does not assume any liability whatsoever for the accuracy or completeness of such information. Final determinations of the suitability of any information or product for the use to be contemplated is the sole responsibility of the user. The manner of that use, and whether there is any infringement of patents, is also the sole responsibility of the user.

globally connecting you at all levels

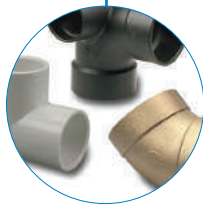


It's a new age of business, and a new way at NIBCO. From Elkhart, Indiana to Lodz, Poland, and points beyond, our company has integrated manufacturing, distribution, and networked communications to provide a seamless source of information and service, 24 hours a day, 7 days a week. But this integration hasn't happened overnight. It's been part of a long-term strategic process that has pushed us to reconsider every aspect of our business. The result? We're a vertically integrated manufacturer with the products and systems in place to deliver low cost and high quality. NIBCO® products are manufactured under a Quality Management System conforming to the current revision of ISO-9001 International Standards. We know the flow control industry is only going to get more demanding, and we are more than ready. We will continue to lead. That's what NIBCO is all about.



NIBCO® PEX Piping Systems • NIBCO® Press System®

## FITTINGS



Wrot and cast copper pressure and drainage fittings • Cast copper alloy flanges  
 • Wrot and cast press fittings • ABS and PVC DWV fittings • Schedule 40 PVC pressure fittings • CPVC CTS fittings • CPVC CTS-to-metal transition fittings  
 • Schedule 80 PVC and CPVC systems • CPVC metric piping systems  
 • CPVC BlazeMaster® fire protection fittings • Lead-Free\* fittings

BlazeMaster® is a registered trademark of The Lubrizol Corporation.  
 \*Weighted average lead content ≤0.25%

## VALVES & ACTUATION

Pressure-rated bronze, iron and alloy-iron gate, globe and check valves • Pressure-rated bronze ball valves • Boiler specialty valves • Commercial and industrial butterfly valves • Circuit balancing valves • Carbon and stainless steel ball valves  
 • ANSI flanged steel ball valves • Pneumatic and electric actuators and controls  
 • Grooved ball and butterfly valves • High performance butterfly valves • UL/FM fire protection valves • MSS specification valves • Bronze specialty valves • Low pressure gate, globe, check and ball valves • Frostproof sillcocks • Quarter-turn supply stops • Quarter-turn low pressure valves • PVC ball valves • CPVC CTS ball valves • Bronze & Iron Y-Strainers • Lead-Free\* valves • Coil-Connect™ Kits

\*Weighted average lead content ≤0.25%



## CHEMTROL®



Thermoplastic pipe, valves and fittings in PVC, Corzan® CPVC, polypropylene and PVDF Kynar® • Pneumatic and electric actuation systems

Corzan® is a registered trademark of The Lubrizol Corporation. • Kynar® is a registered trademark of Arkema Inc.

## eNIBCO

EDI—Electronic Data Interchange • VMI—Vendor Managed Inventory  
 • NIBCO.com • NIBCOpartner.com



**NIBCO®**  
 AHEAD OF THE FLOW®

**NIBCO INC.**  
**WORLD HEADQUARTERS**  
 WEB: [www.nibco.com](http://www.nibco.com)

1516 MIDDLEBURY STREET  
 ELKHART, IN 46516-4740  
 USA

DOMESTIC CUSTOMER SERVICE  
 PHONE: 800.234.0227  
 FAX: 800.234.0557

TECHNICAL SERVICE  
 PHONE: 888.446.4226  
 FAX: 888.336.4226

INTERNATIONAL OFFICE  
 PHONE: +1/574.295.3327  
 FAX: +1/574.295.3455