

## ARITA UL/FM Resilient Seat NRS Gate Valve

### General

#### Model

NGA-32FF series	NRS Flange x Flange
NGA-32GG series	NRS Groove x Groove
NGA-32MJ series	NRS Mechanical Joint x Mechanical Joint
NGA-32FG series	NRS Flange x Groove
NGA-32FM series	NRS Flange x Mechanical Joint



### Features

Features	Benefit
Ductile Iron Body and Bonnet	Weighs ~50% less than conventional cast iron design, easy on-site handling and halved shipping cost
EPDM Coated Ductile Iron Wedge	Full encapsulated design ensures drop-tight sealing and reduction of wear and jamming
Bubble Tight Closure	Zero leakage at full rated pressure
Full Port Waterway	At full open, grants 100% smooth unobstructed flow
Epoxy Resin Coated Body and Bonnet	Enhanced UV protection in exposed installations for long and reliable service life, internally protect against corrosion and abrasion
Three Internal Parts Design	Easy maintenance
Tapping Bosses on Valve Body	Two factory-plugged NPT threaded tapping bosses for connection to pressure gauge or switches remove need of extra tapping saddle



## Technical Data

### Size

2 inch to 24 inch

### Approval

UL Listed  
FM Approved

### Pressure Rating

2 inch to 12 inch	300 PSI
14 inch to 24 inch	250 PSI

### Temperature Rating

32°F ~ 140°F

### Standard

Compliance	UL 262 / FM 1120 / FM 1130 / NFPA 11 NFPA 13 / NFPA 14 / NFPA 15 / NFPA 16 NFPA 20 / NFPA 22 / NFPA 24
Design Standard	AWWA C509 / AWWA C515
Flange Connection Dimension	ASME B16.1 Class 125 / ASME B16.42 ANSI 150
Groove Connection Dimension	AWWA C606
Mechanical Joint Dimension	AWWA C153 / A21.11
Epoxy Coating	AWWA C550
Rubber to Iron bond on Wedge	Inspected per ASTM D 429-73
Gasket and Seals standard	UL 157



## Material Specification

### NGA32 Series

Body: Ductile Iron, ASTM A536 Gr. 65-45-12

Bonnet: Ductile Iron, ASTM A536 Gr. 65-45-12

Body/Bonnet Coating: Epoxy Resin Fusion Bonded

Stem: Stainless Steel, AISI SS304

Wedge: EPDM Coated Ductile Iron, ASTM A536 Gr. 65-45-12

Packing: PTFE

Gasket: EPDM

O-Ring: EPDM

Stem Nut: Bronze, ASTM B62

Bolt, Nut, Plug: ASTM SS304

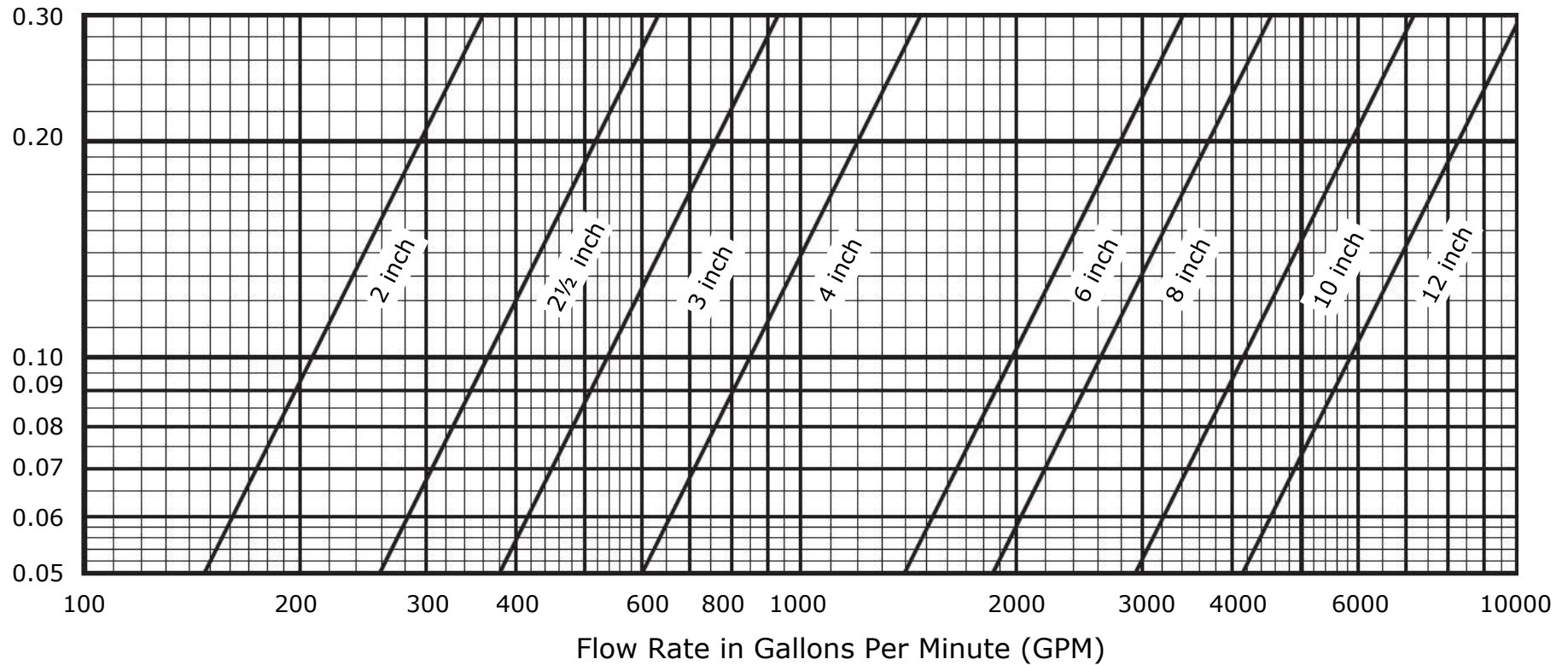
### Optional

Couple with UIP series (Underground) or WIP (Wall Post) series Indicator Post



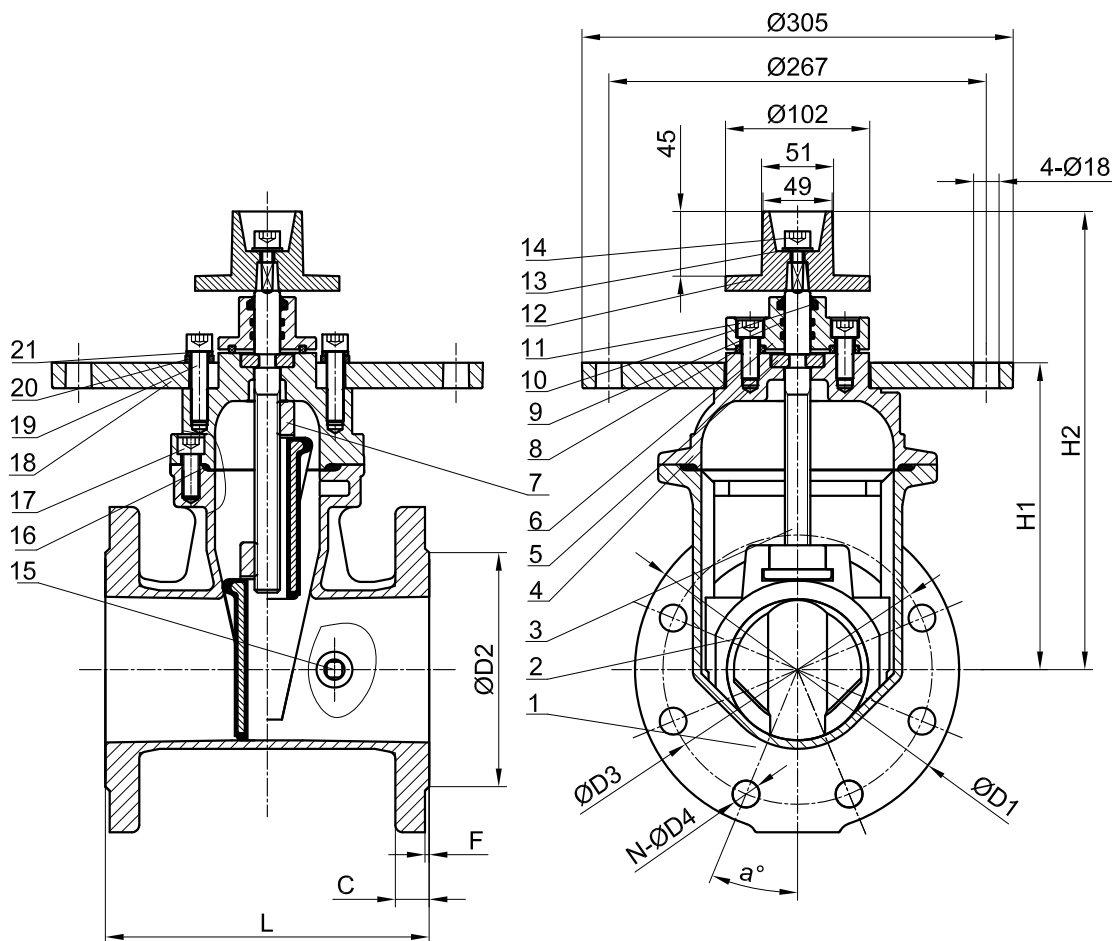
## Flow Rate

Nominal Pressure Drop  
in PSI



**Gate Valve Friction Loss**

# ARITA


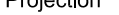


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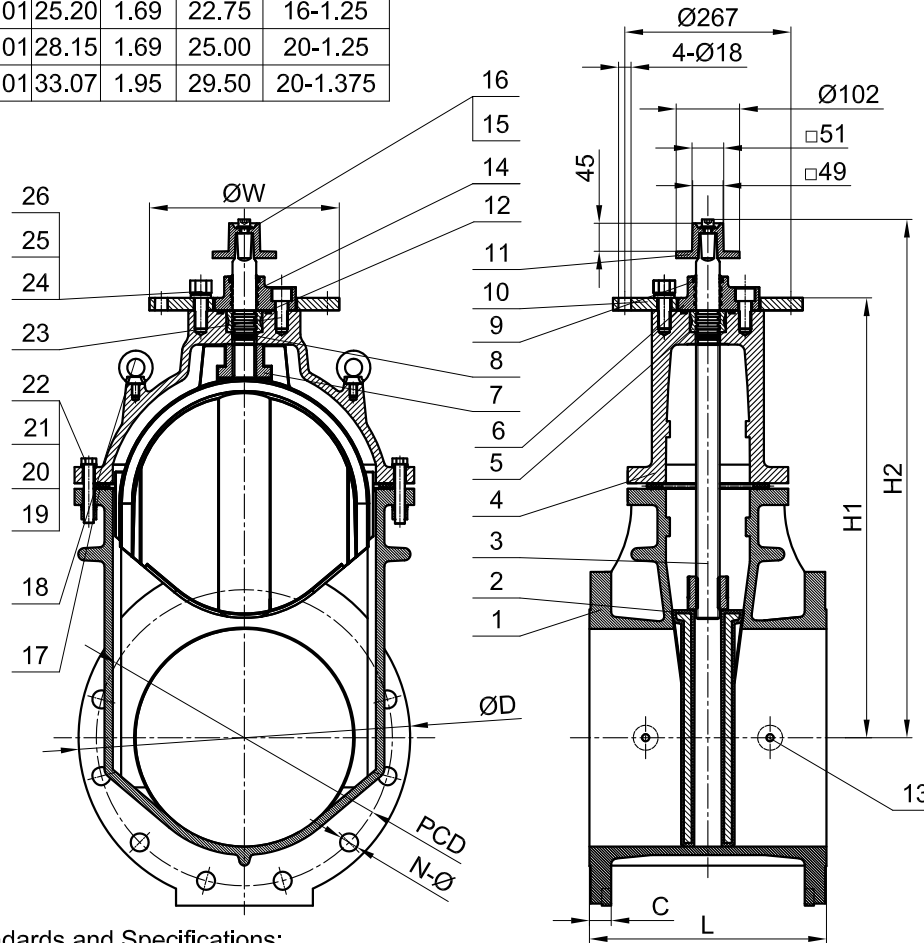
- 1.JOINT: FLANGE TO ANSI150.
- 2.WORKING TEMPERATURE:0°C~65°C.
- 3.DESIGN STANDARD: AWWA C515.
- 4.WORKING PRESSURE:300PSI.

SIZE	2"	2.5"	3"	4"	5"	6"	8"	10"	12"
L	7.01	7.52	7.99	9.02	10.00	10.51	11.50	12.99	14.02
H1	6.81	6.81	7.60	8.54	10.94	12.28	15.63	19.37	22.76
H2	10.98	10.98	12.01	12.76	15.51	16.85	21.14	25.20	28.46
ΦD1	6.50	7.09	7.48	9.06	10.04	11.02	13.58	15.94	19.09
C	0.59	0.65	0.71	0.90	0.90	0.96	1.09	1.15	1.21
ΦD2	3.63	4.13	5.00	6.19	7.31	8.50	10.63	12.75	15.00
F	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
ØD3	4.75	5.50	6.00	7.50	8.50	9.50	11.77	14.25	17.01
N	4	4	4	8	8	8	8	12	12
a°	45°	45°	45°	22.5°	22.5°	22.5°	22.5°	15°	15°
ΦD4	0.75	0.75	0.75	0.75	0.87	0.87	0.87	1.00	1.00

21	SPRING WASHER	CARBON STEEL GALVANIZATION
20	WASHER	CARBON STEEL GALVANIZATION
19	HEX.SOCKET CAP SCREW	GR 8.8
18	POST FLANGE	ASTM A536 65-45-12
17	HEX.SOCKET CAP SCREW	GR 8.8
16	GASKET	EPDM
15	PLUG	ASTM SS304
14	HEX.SOCKET CAP SCREW	FR 8.8
13	WASHER	ASTM SS304
12	WRENCH NUT	ASTM A536 65-45-12
11	HEX.SOCKET CAP SCREW	GR 8.8
10	DUSTPROOF COVER	EPDM
9	O-RING	EPDM
8	SEAT RING	EPDM
7	DISC NUT	ASTM B62
6	GLAND	ASTM A536 65-45-12/ASTM A351 CF8
5	THRUST COLLAR	ASTM C51100
4	BONNET	ASTM A536 65-45-12
3	STEM	AISI SS304/SS420
2	WEDGE	ASTM A536 65-45-12+EPDM
1	BODY	ASTM A536 65-45-12
ITEM	NAME	MATERIAL

Manufacture/Supplier: Arita Valve			SHOP DRAWING					FIG NO. 32FF				
								DRAWN		Date		TITLE: NRS Resilient Seat GateValve DN50-DN300 ANSI 150 FLANGE JIONT
								Checked		Date		
								Approved		Date		
									Projection		ALL DIM'S IN: inch DO NOT SCALE FROM DRAWING	
REV.	BY	APP.	Description			Date						




INCH	L	H1	H2	ØW	ØD	C	ANSI 150	
							PCD	N-Ø
14	15.00	27.83	32.80	12.01	20.98	1.38	18.75	12-1.125
16	15.98	30.79	36.30	12.01	23.50	1.52	21.25	16-1.125
18	17.01	34.92	41.42	12.01	25.20	1.69	22.75	16-1.25
20	17.99	38.27	44.88	12.01	28.15	1.69	25.00	20-1.25
24	20.00	44.25	50.87	12.01	33.07	1.95	29.50	20-1.375



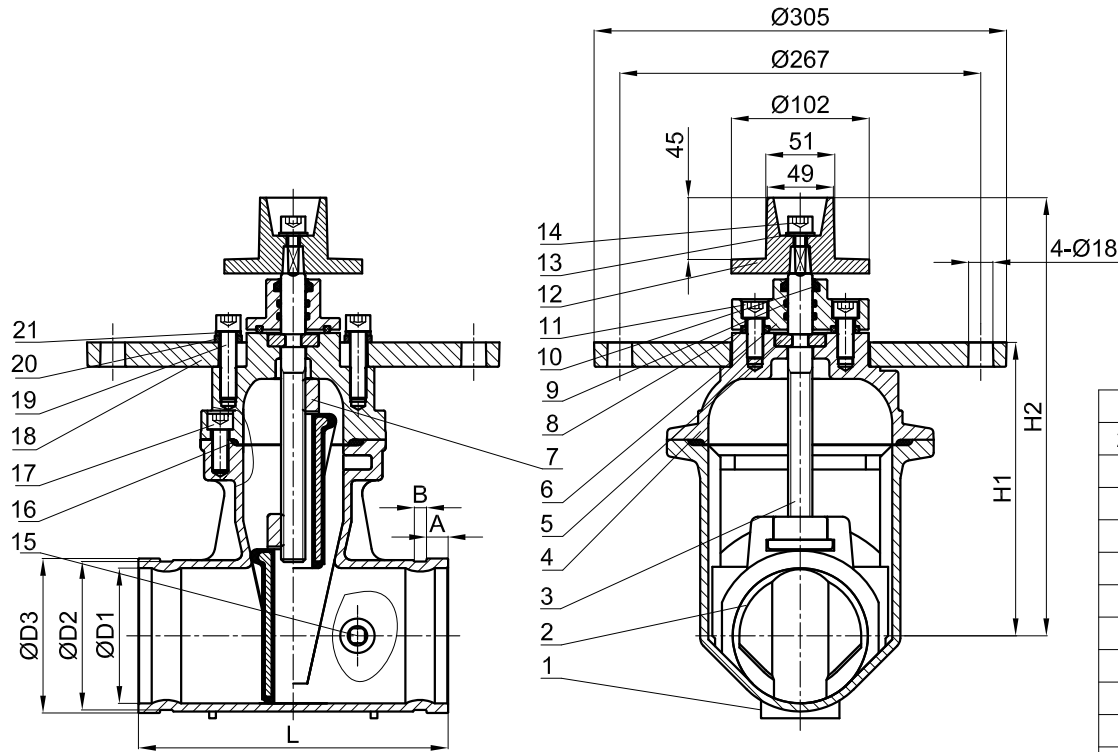
Size	Working pressure	Working temperature
14"	250PSI	-10°C~120°C
16"	250PSI	-10°C~120°C
18"	250PSI	-10°C~120°C
20"	200PSI	-10°C~120°C
24"	200PSI	-10°C~120°C

24	Allen long cylindrical side set screws	ASTM SS304
23	Hex cylinder head screw	ASTM SS304 8.8
22	Washer	ASTM SS304
21	Nut	ASTM SS304
20	Spring washer	ASTM SS304
19	Bolt	ASTM SS304 8.8
18	Lifting bolt	STEEL
17	Gasket	EPDM
16	Hex cylinder head screw	ASTM SS304 8.8
15	Spring washer	ASTM SS304
14	O-ring	EPDM
13	Square pipe plug	ASTM SS304
12	O-ring	EPDM
11	Square head	ASTM A536 65-45-12
10	Key(A type)	ASTM A1045
9	Dust cover	EPDM
8	O-ring	EPDM
7	Plate nut	ASTM B62 C83600
6	Seal seat	ASTM A536 65-45-12
5	Split ring	ASTM B62 C83600
4	Cover	ASTM A536 65-45-12
3	Shaft	AISI SS304/SS431
2	Seat rubber coating	ASTM A536 65-45-12+EPDM
1	Body	ASTM A536 65-45-12
NO.	NAME	MATERIAL

Valve Compliances to Standards and Specifications:  
 1.Design and manufacture are according to AWWAC515;  
 2.Face to face accords to EN558-1 series 3;  
 3.End flanges are drilled to ANSI CLASS 150 .

Manufacture/Supplier: Arita Valve			SHOP DRAWING					FIG NO. 32FF				
								DRAWN		Date		TITLE: NRS Resilient seat gate valve (wall type manipulation of the tube) 14-16 ANSI150
								Checked		Date		
								Approved		Date		
			REV.	BY	APP.	Description	Date	Projection		ALL DIM'S IN: inch DO NOT SCALE FROM DRAWING		DRAWING NO. :
												

# ARITA





**NOTE:**

1. JOINT: GROOVED AWWA C606.
2. WORKING TEMPERATURE: 0°C~65°C.
3. DESIGN STANDARD: AWWA C515.
4. WORKING PRESSURE: 300PSI.

SIZE	2	2.5	3	4	5	6	8	10	12
L	7.01	7.52	7.99	9.02	10.00	10.51	11.50	12.99	14.02
H1	6.81	7.09	7.60	8.54	10.94	12.28	15.63	19.37	22.76
H2	10.98	10.98	12.01	12.76	15.51	16.85	21.14	25.20	28.46
A	0.63	0.63	0.63	0.63	0.63	0.63	0.75	0.75	0.75
B	0.31	0.31	0.31	0.37	0.37	0.37	0.43	0.50	0.50
ØD1	1.97	2.56	3.15	3.94	4.92	5.91	7.87	9.84	11.81
ØD2	2.24	2.71	3.33	4.32	5.39	6.44	8.43	10.55	12.52
ØD3	2.37	2.87	3.50	4.50	5.56	6.63	8.63	10.75	12.75

21	SPRING WASHER	CARBON STEEL GALVANIZATION
20	WASHER	CARBON STEEL GALVANIZATION
19	HEX.SOCKET CAP SCREW	GR 8.8
18	POST FLANGE	ASTM A536 65-45-12
17	HEX.SOCKET CAP SCREW	GR 8.8
16	GASKET	EPDM
15	PLUG	ASTM SS304
14	HEX.SOCKET CAP SCREW	GR 8.8
13	WASHER	ASTM SS304
12	WRENCH NUT	ASTM A536 65-45-12
11	HEX.SOCKET CAP SCREW	GR 8.8
10	DUSTPROOF COVER	EPDM
9	O-RING	EPDM
8	SEAT RING	EPDM
7	DISC NUT	ASTM B62
6	GLAND	ASTM A536 65-45-12/ASTM A351 CF8
5	THRUST COLLAR	ASTM C51100
4	BONNET	ASTM A536 65-45-12
3	STEM	AISI SS304/SS420
2	WEDGE	ASTM A536 65-45-12+EPDM
1	BODY	ASTM A536 65-45-12
ITEM	NAME	MATERIAL

Manufacture/Supplier:				SHOP DRAWING				FIG NO. 32GG			
Arita Valve											
								DRAWN		Date	
								Checked		Date	
								Approved		Date	
								Projection		ALL DIM'S IN: inch DO NOT SCALE FROM DRAWING	
REV.	BY	APP.	Description				Date			DRAWING NO. : YH-ZX-2-12-00G-00	

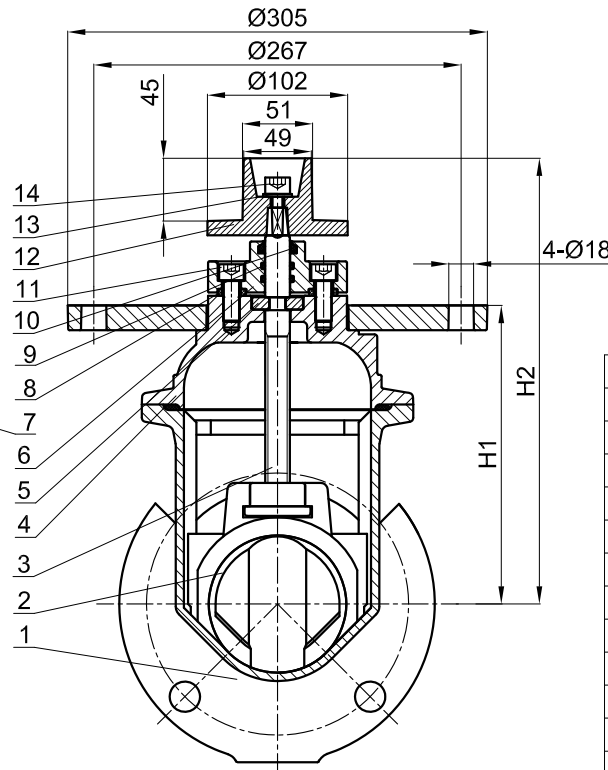
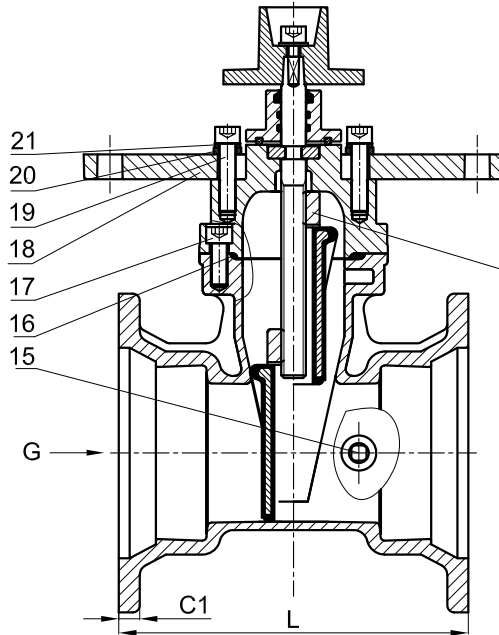
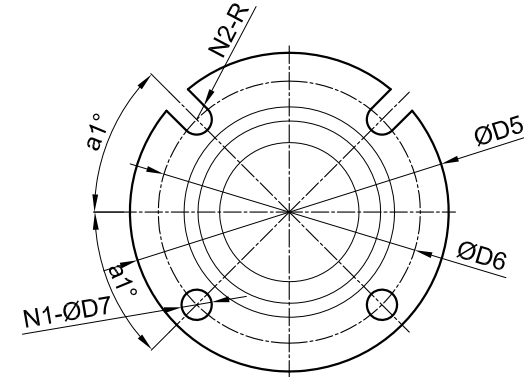
TITLE:  
NRS Resilient Seat Gate Valve  
2-12 GROOVED JIONT

# ARITA

**NOTE:**

- 1.JOINT: MECHANICAL JOINT FLANGE TO AWWA C153/A21.11.
- 2.WORKING TEMPERATURE:0°C~65°C.
- 3.DESIGN STANDARD: AWWA C515.
- 4.WORKING PRESSURE:300PSI.

**G DIRECITON VIEW**



SIZE	L	H1	H2	ØD5	C1	ØD6	N1	a1°	ØD7	N2	R
3	9.49	7.60	12.01	7.62	0.58	6.19	2	45°	0.75	2	0.37
4	10.00	8.54	12.76	9.12	0.60	7.50	2	45°	0.87	2	0.43
6	11.50	12.28	16.85	11.10	0.63	9.50	4	60°	0.87	2	0.43
8	12.52	15.63	21.14	13.31	0.66	11.75	4	60°	0.87	2	0.43
10	14.76	19.37	25.20	15.63	0.70	14.00	6	22.5°	0.87	2	0.43
12	14.88	22.76	28.46	17.87	0.73	16.25	4	22.5°	0.87	4	0.43

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17	HEX.SOCKET CAP SCREW	GR 8.8
16	GASKET	EPDM
15	PLUG	ASTM SS304
14	HEX.SOCKET CAP SCREW	GR 8.8
13	WASHER	ASTM SS304
12	WRENCH NUT	ASTM A536 65-45-12
11	HEX.SOCKET CAP SCREW	GR 8.8
10	DUSTPROOF COVER	EPDM
9	O-RING	EPDM
8	SEAT RING	EPDM
7	DISC NUT	ASTM B62
6	GLAND	ASTM A536 65-45-12/ASTM A351 CF8
5	THRUST COLLAR	ASTM C51100
4	BONNET	ASTM A536 65-45-12
3	STEM	AISI SS304/SS420
2	WEDGE	ASTM A536 65-45-12+EPDM
1	BODY	ASTM A536 65-45-12
ITEM	NAME	MATERIAL

Manufacture/Supplier:

Arita Valve

**SHOP DRAWING**

**FIG NO. 32MJ**



REV.	BY	APP.	Description	Date

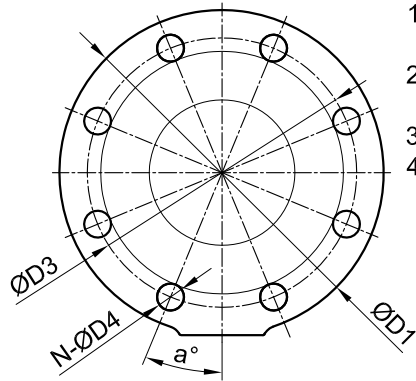
DRAWN		Date	
Checked		Date	
Approved		Date	
Projection		ALL DIM'S IN: inch DO NOT SCALE FROM DRAWING	

TITLE:	
NRS Resilient Seat Gate Valve 3-12 MECHANICAL JOINT	
DRAWING NO. :	
ARITA-ZX-3-12-00JJ-00	



# ARITA

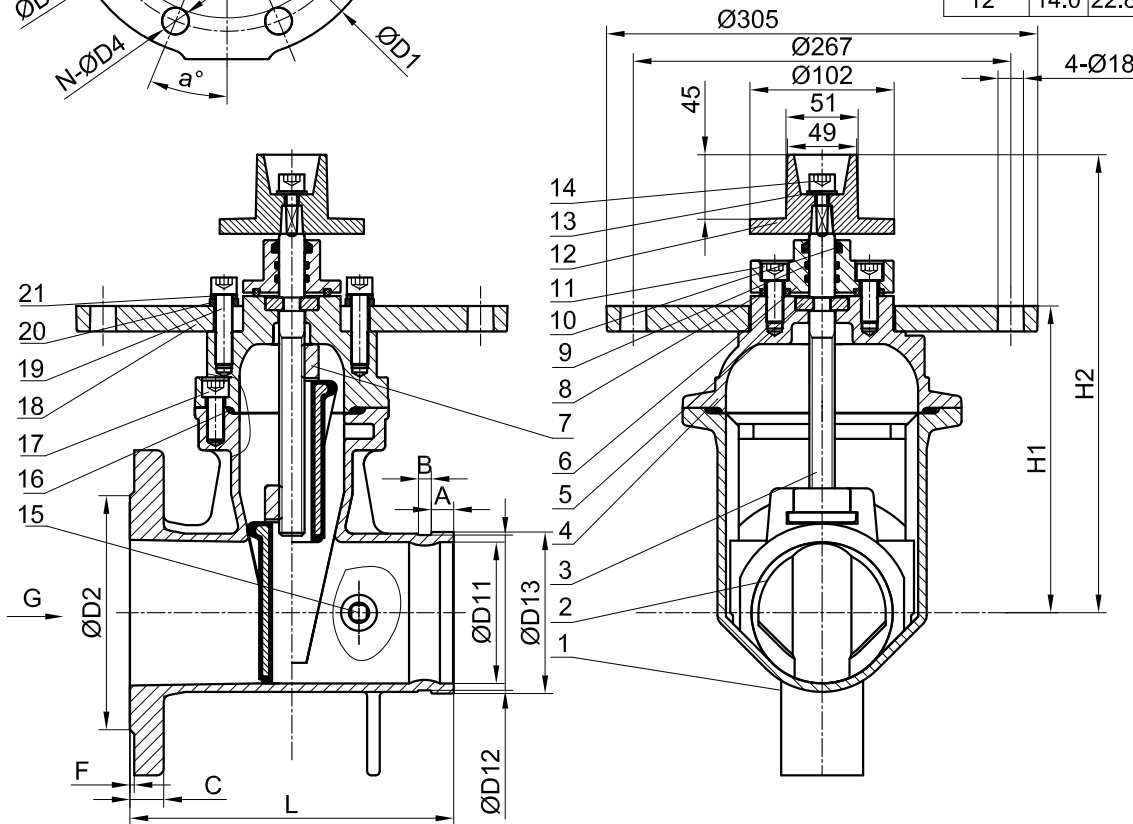
## G DIRECTION VIEW



### NOTE:

1. JOINT: FLANGE TO ANSI150, GROOVED AWWA C606.
2. WORKING TEMPERATURE: 0°C~65°C.
3. DESIGN STANDARD: AWWA C515.
4. WORKING PRESSURE: 300PSI.

SIZE	L	H1	H2	ΦD1	C	ΦD2	F	ØD3	N	a°	ΦD4	A	B	ØD11	ØD12	ØD13
2"	7.0	6.8	11.0	6.5	0.6	3.6	0.1	4.8	4	45°	0.8	0.6	0.3	2.0	2.2	2.4
2.5"	7.5	6.8	11.0	7.1	0.6	4.1	0.1	5.5	4	45°	0.8	0.6	0.3	2.6	2.7	2.9
3"	8.0	7.6	12.0	7.5	0.7	5.0	0.1	6.0	4	45°	0.8	0.6	0.3	3.1	3.3	3.5
4"	9.0	8.5	12.8	9.1	0.9	6.2	0.1	7.5	8	22.5°	0.7	0.6	0.4	3.9	4.3	4.5
5"	10.0	10.9	15.5	10.0	0.9	7.3	0.1	8.5	8	22.5°	0.9	0.6	0.4	4.9	5.4	5.6
6"	10.5	12.3	16.9	11.0	1.0	8.5	0.1	9.5	8	22.5°	0.9	0.6	0.4	5.9	6.4	6.6
8"	11.5	15.6	21.1	13.6	1.1	10.6	0.1	11.8	8	22.5°	0.9	0.7	0.4	7.9	8.4	8.6
10"	13.0	19.4	25.2	15.9	1.1	12.7	0.1	14.3	12	15°	1.0	0.7	0.5	9.8	10.6	10.7
12"	14.0	22.8	28.5	19.1	1.2	15.0	0.1	17.0	12	15°	1.0	0.7	0.5	11.8	12.5	12.8



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17	HEX.SOCKET CAP SCREW	GR 8.8
16	GASKET	EPDM
15	PLUG	ASTM SS304
14	HEX.SOCKET CAP SCREW	GR 8.8
13	WASHER	ASTM SS304
12	WRENCH NUT	ASTM A536 65-45-12
11	HEX.SOCKET CAP SCREW	GR 8.8
10	DUSTPROOF COVER	EPDM
9	O-RING	EPDM
8	SEAT RING	EPDM
7	DISC NUT	ASTM B62
6	GLAND	ASTM A536 65-45-12/ASTM A351 CF8
5	THRUST COLLAR	ASTM C51100
4	BONNET	ASTM A536 65-45-12
3	STEM	AISI SS304/SS420
2	WEDGE	ASTM A536 65-45-12+EPDM
1	BODY	ASTM A536 65-45-12
ITEM	NAME	MATERIAL

Manufacture/Supplier:

Arita Valve

SHOP DRAWING

FIG NO. 32FG



REV.	BY	APP.	Description	Date	

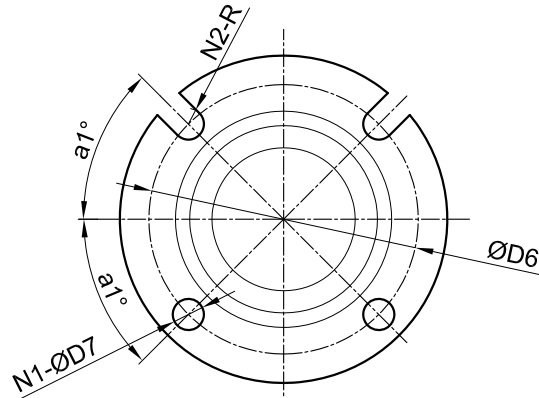
DRAWN		Date	
Checked		Date	
Approved		Date	
Projection			

TITLE:	
NRS Resilient Seat Gate Valve DN50-DN300 ANSI 150 FLANGE AND GROOVED JOINT	
DRAWING NO. :	
YH-ZX-50-300-00FG-A150-00	

ALL DIM'S IN: inch  
DO NOT SCALE  
FROM DRAWING

# ARITA

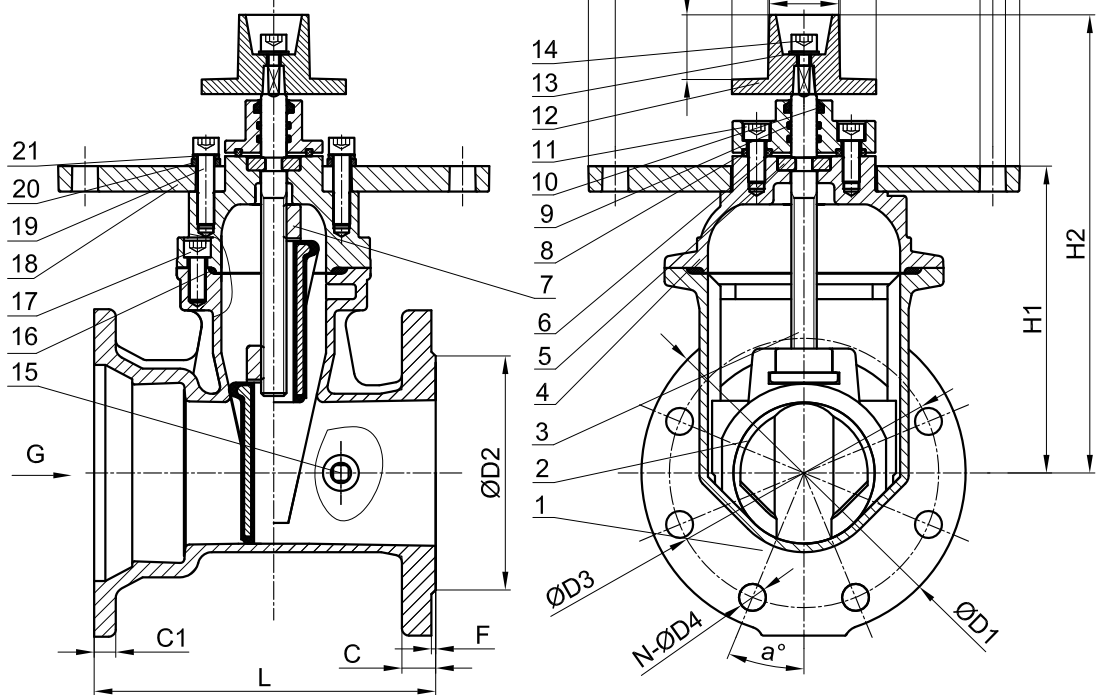
G DIRECTION VIEW



SIZE	L	H1	H2	ØD5	C1	ΦD6	N1	a1°	ΦD7	N2	R	ΦD1	C	ΦD2	F	ØD3	N	a°	ΦD4
3"	8.7	7.6	12.0	7.6	0.6	6.2	2	45°	0.7	2	0.4	7.5	0.7	5.0	2	6.0	4	45°	0.8
4"	9.5	8.5	12.8	9.1	0.6	7.5	2	45°	0.9	2	0.4	9.1	0.9	6.2	2	7.5	8	22.5°	0.8
6"	11.0	12.3	16.9	11.1	0.6	9.5	4	60°	0.9	2	0.4	11.0	1.0	8.5	2	9.5	8	22.5°	0.9
8"	12.0	15.6	21.1	13.3	0.7	11.8	4	60°	0.9	2	0.4	13.6	1.1	10.6	2	11.8	8	22.5°	0.9
10"	13.9	19.4	25.2	15.6	0.7	14.0	6	22.5°	0.9	2	0.4	15.9	1.1	12.7	2	14.3	12	15°	1.0
12"	14.4	22.8	28.5	17.9	0.7	16.3	4	22.5°	0.9	4	0.4	19.1	1.2	15.0	2	17.0	12	15°	1.0

**NOTE:**

- 1.JOINT: FLANGE TO ANSI150,  
MECHANICAL JOINT FLANGE TO AWWA C153/A21.11.
- 2.WORKING TEMPERATURE:0°C~65°C.
- 3.DESIGN STANDARD: AWWA C515.
- 4.WORKING PRESSURE:300PSI.



21	SPRING WASHER	CARBON STEEL GALVANZATION
20	WASHER	CARBON STEEL GALVANZATION
19	HEX.SOCKET CAP SCREW	GR 8.8
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15	PLUG	ASTM SS304
14	HEX.SOCKET CAP SCREW	GR 8.8
13	WASHER	ASTM SS304
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11	HEX.SOCKET CAP SCREW	GR 8.8
10	DUSTPROOF COVER	EPDM
9	O-RING	EPDM
8	SEAT RING	EPDM
7	DISC NUT	ASTM B62
6	GLAND	ASTM A536 65-45-12/ASTM A351 CF8
5	THRUST COLLAR	ASTM C51100
4	BONNET	ASTM A536 65-45-12
3	STEM	AISI SS304
2	WEDGE	ASTM A536 65-45-12+EPDM
1	BODY	ASTM A536 65-45-12
ITEM	NAME	MATERIAL

Manufacture/Supplier:

Arita Valve

SHOP DRAWING

FIG NO. 32FM



REV.	BY	APP.	Description	Date	

DRAWN		Date	
Checked		Date	
Approved		Date	
Projection			

TITLE:	
NRS Resilient Seat Gate Valve DN80-DN300 ANSI 150 FLANGE AND MECHANICAL JOINT	
DRAWING NO. :	
YH-ZX-80-300-00FJ-A150-00	

ALL DIM'S IN: inch  
DO NOT SCALE  
FROM DRAWING