

**RESILIENT
WEDGE VALVES**

CLOW VALVE COMPANY

**CLOW AWWA Resilient Wedge Gate Valves
Meet or Exceed the Requirements of
AWWA Standard C509**

Size Range	Water Working Pressure psi	Bubble Tight Test psi	Hydrostatic Shell Test psi
AWWA 2"-12"	250	250	500
ULFM 4"-12"	200	200	400

Available in either non-rising stem, outside screw & yoke.

Available End Connections & Size Range

Figure No.

FLG End (NRS)	2"-12"	F-6102
M.J.	2"-12" (except 2 1/2")	F-6100
FLG & M.J.	3"-12"	F-6106
Push-on for PVC (SDR)	2"-8"	F-6110
FLG End (OS & Y)	2 1/2"-12"	F-6136
M.J. for Tapping	4"-12"	F-6114
Tyton for D.I. & C900 PVC	4"-12"	F-6112
M.J. Cutting-in	4"-12"	F-6111
Push-on for D.I. X FLG	4"-12"	F-6113
Threaded	2"-3"	F-6103
Push-on for C.I. for Tapping	4"-8"	F-6115

Accessories (Illustrated in the Gate Valve Section)

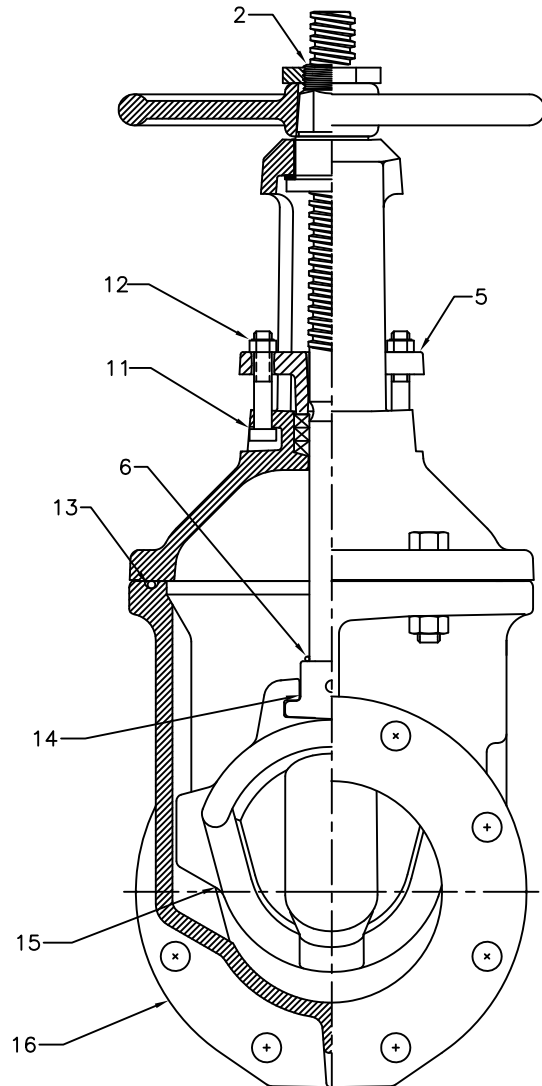
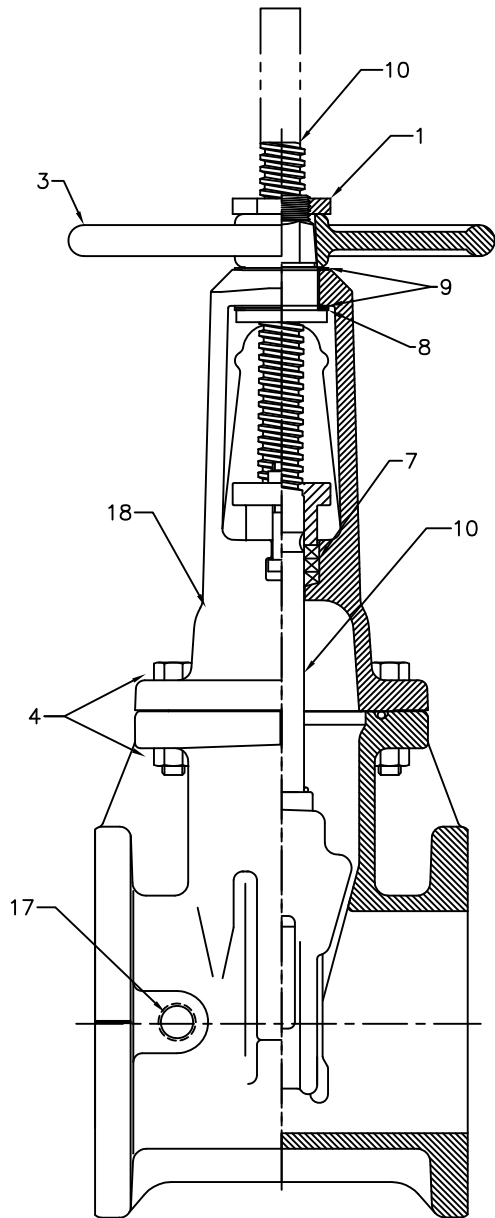
Indicator Posts	2" Sq. Operating Nuts
"T" Handles	Handwheels
Stem Guides	Extension Stems
Electric Motor Actuators	Floor Boxes
	Chain Wheels
	Floorstands (non-rising stem)

MODEL	2639	AWWA	C509	FULL BODY DUCTILE IRON
MODEL	2640	AWWA	C509	FULL BODY GRAY IRON

Complies with applicable requirements of AWWA C509

2"-12" R/W OS&Y VALVE
EPDM MATERIAL LIST
CLOW VALVE COMPANY

MODEL 2640



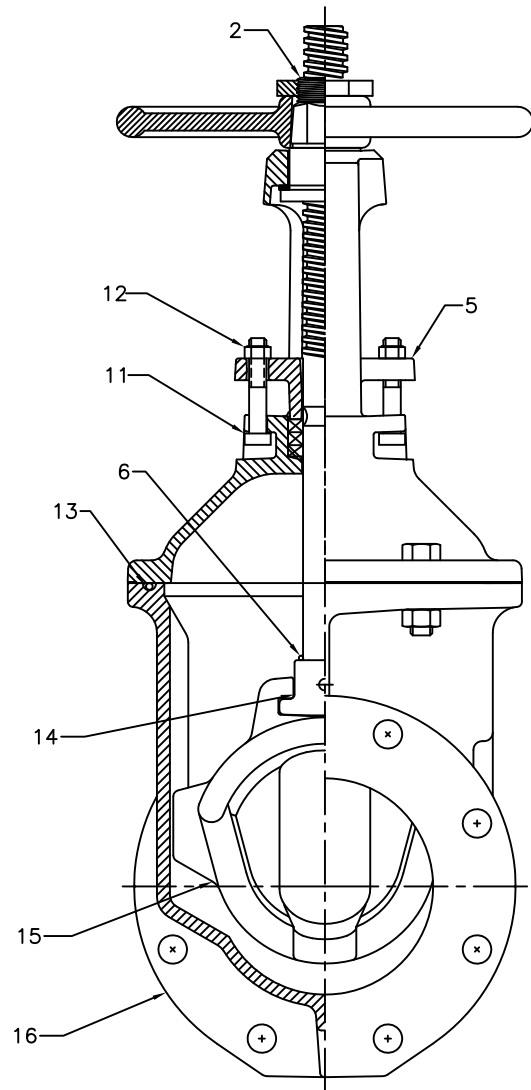
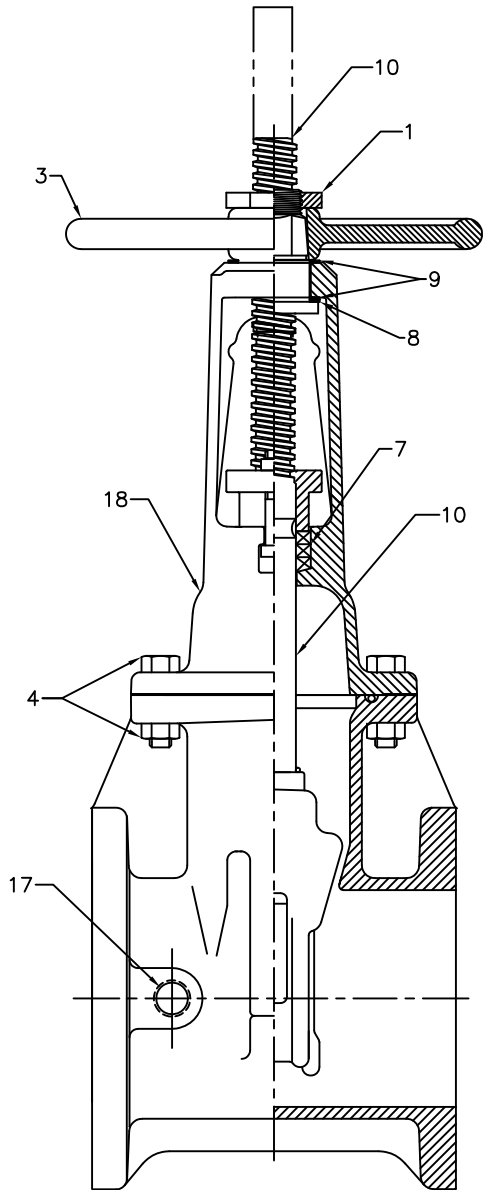
ITEM	DESCRIPTION	MATERIAL	ASTM SPEC.
1	Handwheel Hold Down Nut	Bronze	ASTM B584 C83600
2	Top Stem Nut	Bronze	ASTM B584 C86700
3	Handwheel	Gray Iron	ASTM A126 CI B
4	Hex Head Bolts & Nuts	Zinc Chromate Plated Steel	ASTM A307 Gr B
5	Follower Gland	Gray Iron	ASTM A126 CI B
6	Stem O-Ring	EPDM	-----
7	Packing	Square Braided Polymer	-----
8	Thrust Washer Bearing	Delrin	-----
9	Thrust Washer 2-2½" (0); 3-4" (1) 6-12" (2)	Bronze	ASTM B36 C260
10	Stem	Bronze	ASTM B584 C86700
11	Packing Bolts	Zinc Chromate Plated Steel	ASTM A307 Gr B
12	Packing Bolt Nuts	Brass	Commercial
13	Cover O-Ring	EPDM	-----
14	Stem Nut	Bronze	ASTM B584 C83600
15	Wedge	Gray Iron & EPDM	ASTM A126 CI B
16	Body - all types	Gray Iron	ASTM A126 CI B
17	Pipe Plug (Optional Some Styles)	Stainless Steel	-----
18	Cover (2", 4"-12")	Gray Iron	ASTM A126 CI B
	Cover (2 1/2"-3")	Ductile Iron	ASTM A536 65-45-12

Complies with applicable requirements of AWWA C509

2"-12" R/S VALVE
MATERIAL LIST

CLOW VALVE COMPANY

MODEL 2639



ITEM	DESCRIPTION	MATERIAL	ASTM SPEC.
1	Handwheel Hold Down Nut	Bronze	ASTM B62
2	Top Stem Nut	Bronze	ASTM B584 C86700
3	Handwheel	Gray Iron	ASTM A126 CI B
4	Hex Head Bolts & Nuts	Zinc Plated Steel	ASTM A307 Gr B
5	Followe Gland	Gray Iron	ASTM A126 CI B
6	Stem O-Ring	EPDM	-----
7	Packing	Square Braided Polymer	-----
8	Thrust Washer Bearing	Delrin	-----
9	Thrust Washer 2-2½" (0); 3-4" (1) 6-12" (2)	Bronze	ASTM B36 C260
10	Stem	Bronze	ASTM B584 C86700
11	Packing Bolts	Zinc Plated Steel	ASTM A307 Gr B
12	Packing Bolt Nuts	Brass	Commercial
13	Cover O-Ring	EPDM	-----
14	Stem Nut	Bronze	ASTM B584 C83600
15	Wedge	Gray Iron & EPDM	ASTM A126 CI B
16	Body - all types	Ductile Iron	ASTM A536 65-45-12
17	Pipe Plug (Optional Some Styles)	Stainless Steel	-----
18	Cover	Ductile Iron	ASTM A536 65-45-12

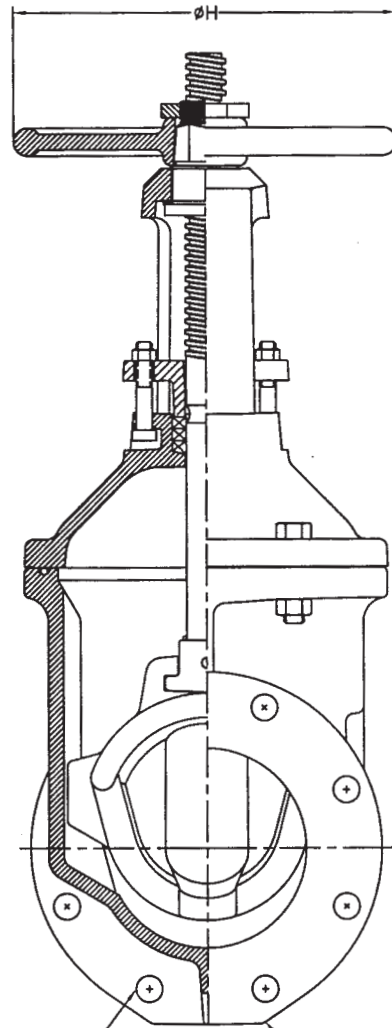
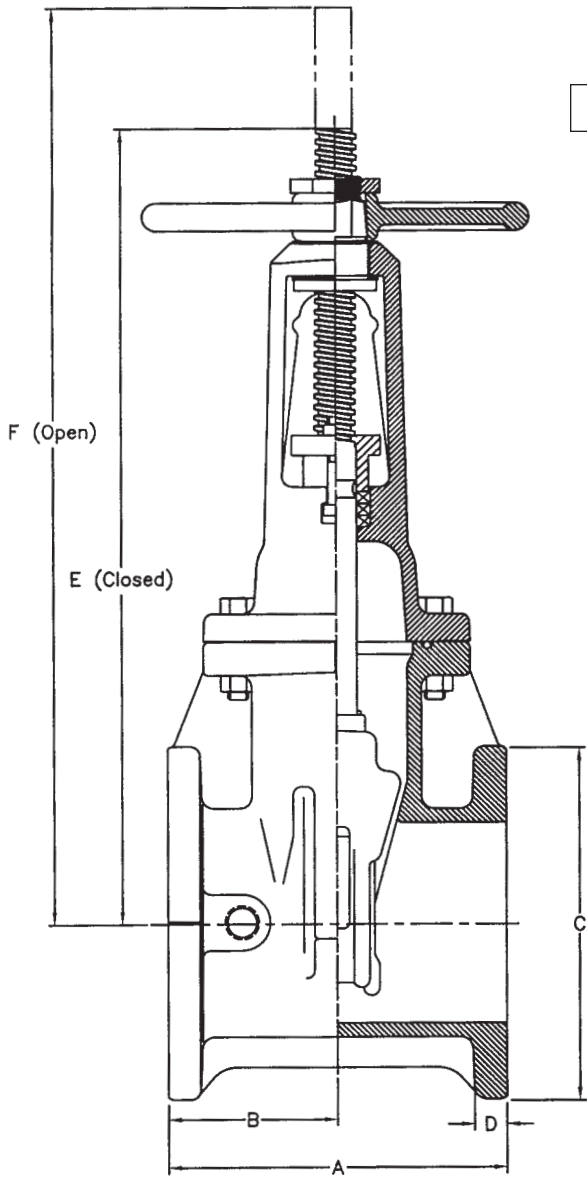
Complies with applicable requirements of AWWA C509

2"-12" R/W VALVE FLANGE ENDS
OS&Y GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6136



G
No. & Size Of Bolts

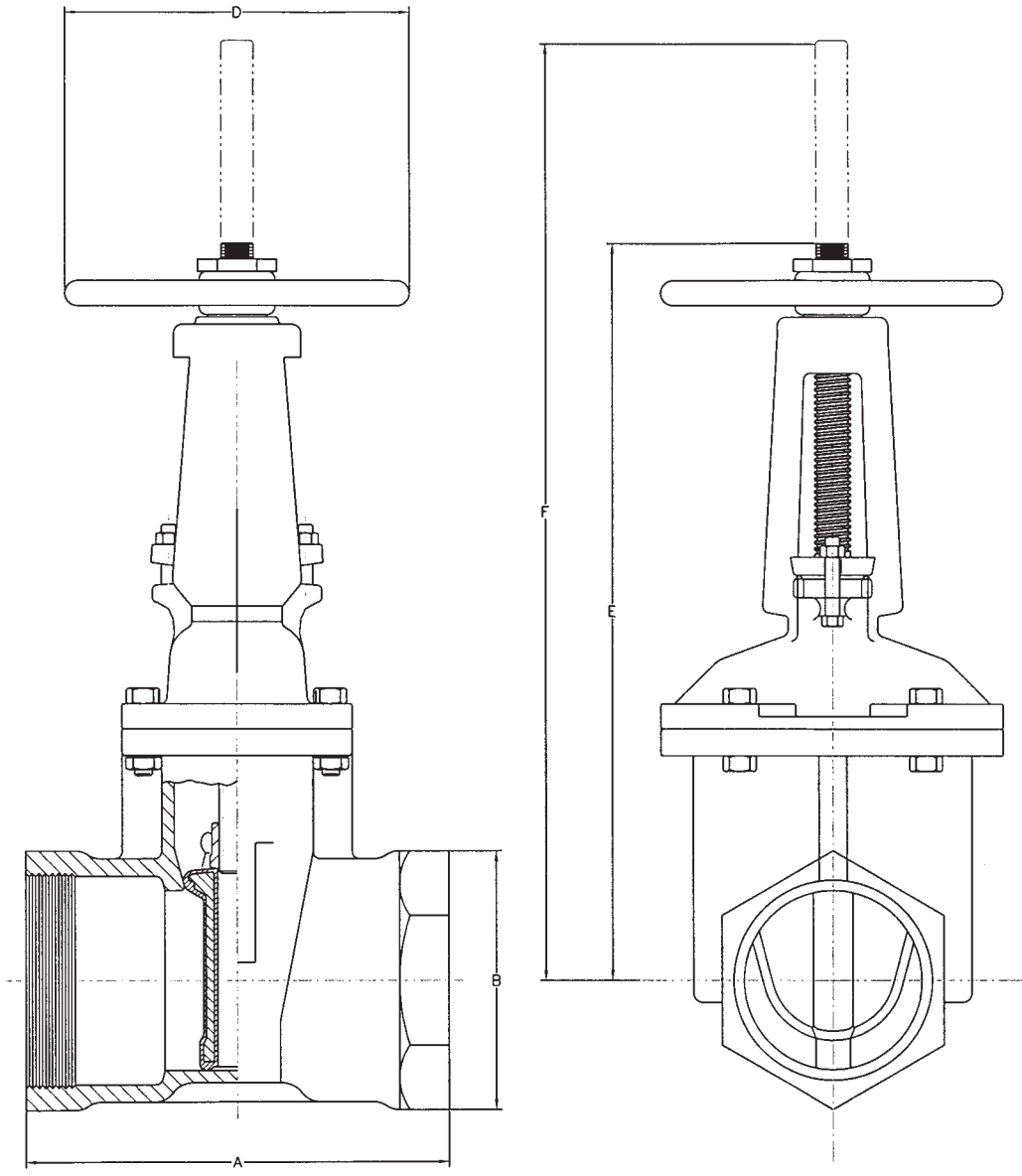
Flanges
ANSI B16.1-CL 125

VALVE SIZE	A	B	C	D	E	F	G	H
2	7	3 1/2	6	5/8	12	10	4-5/8	7 1/4
2 1/2	7 1/2	3 3/4	7	11/16	13 7/8	16 3/8	4-5/8	7 1/4
3	8	4	7 1/2	3/4	15 5/8	18 7/8	4-5/8	10
4	9	4 1/2	9	15/16	18 1/4	22 3/4	8-5/8	10
6	10 1/2	5 1/4	11	1	23 3/4	30 1/8	8-3/4	12
8	11 1/2	5 3/4	13 1/2	1 1/8	29 1/4	37 3/4	8-3/4	14
10	13	6 1/2	16	1 3/16	35 3/8	45 3/4	12-7/8	18
12	14	7	19	1 1/4	40 5/8	53 1/8	12-7/8	18

2 1/2" - 3" R/W OS & Y VALVE
Threaded Ends General Dimension Layout

CLOW VALVE COMPANY

MODEL 2639 & 2640



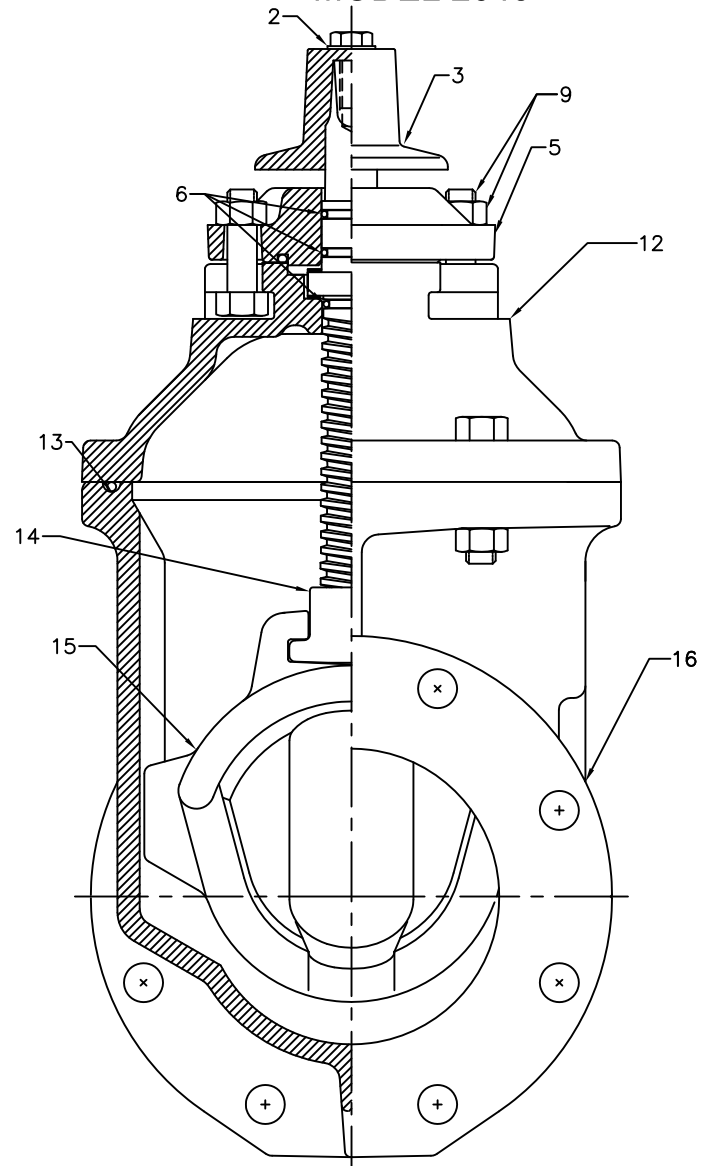
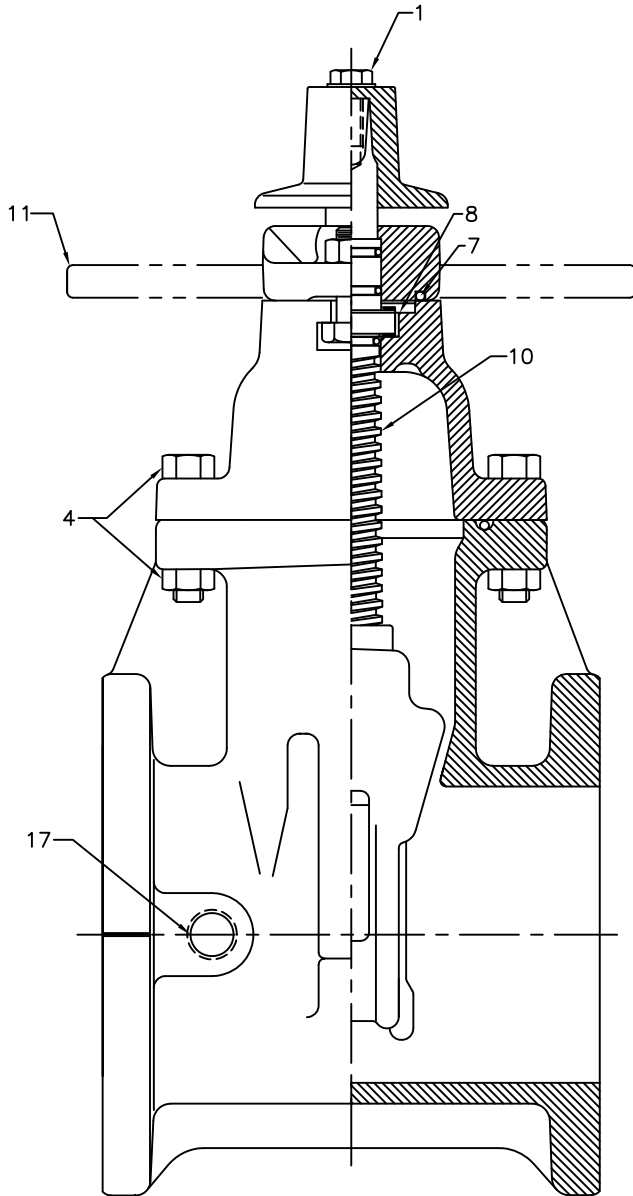
VALVE SIZE	A	B	D	E	F
2	5 1/4	4 1/8	7 1/4	12	10
2 1/2	7	5 3/16	7 1/4	13 7/8	16 3/8
3	7 1/2	5 3/16	10	15 5/8	18 7/8

Complies with applicable requirements of AWWA C509

2"-12" R/W VALVE
MATERIAL LIST

CLOW VALVE COMPANY

MODEL 2640



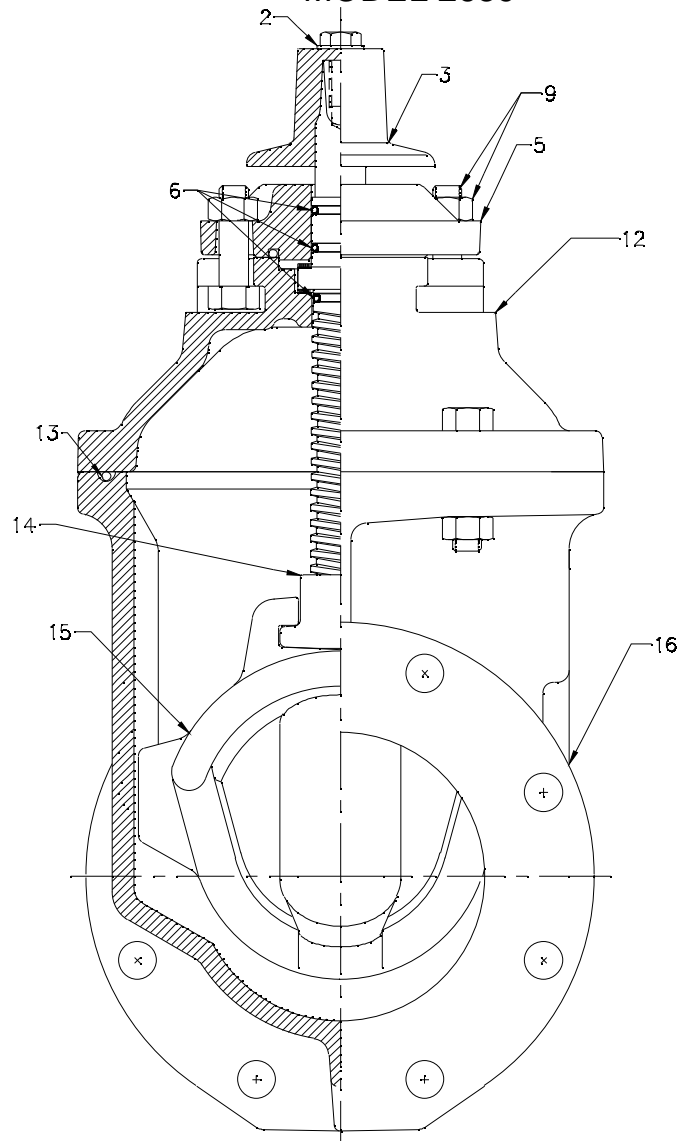
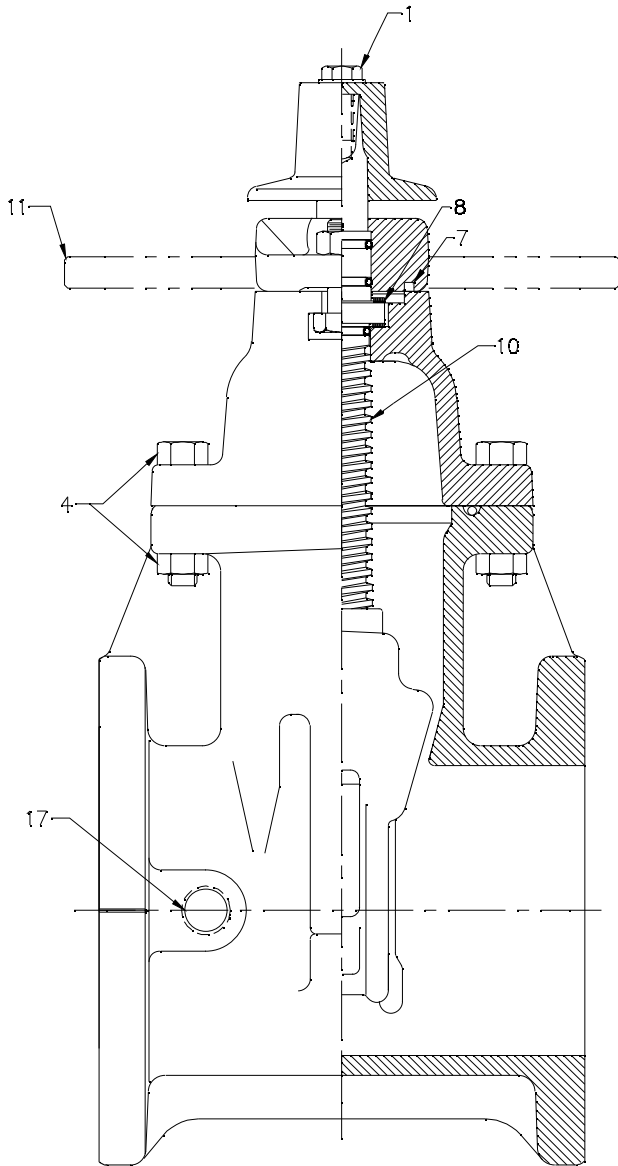
ITEM	DESCRIPTION	MATERIAL	ASTM SPEC.
1	Hex Head Bolt	Stainless Steel	ASTM F593 304 SST
2	Flat Washer	Stainless Steel	304 SST
3	Operating Nut	Gray Iron	ASTM A126 CI B
4	Hex Head Bolts & Nuts	Stainless Steel	ASTM F593/4 304 SST
5	Follower Plate	Gray Iron	ASTM A126 CI B
6	Stem O-Ring	EPDM	-----
7	Follower Plate O-Ring/gasket	EPDM	-----
8	Thrust Washer Bearing	Delrin	-----
9	Hex Head Bolts & Nuts	Stainless Steel	ASTM F593/4 304 SST
10	Stem	Bronze	ASTM B584 C86700
11	Indicator Post Plate (Optional 3-12")	Gray Iron	ASTM A126 CI B
12	Cover	Gray Iron	ASTM A126 CI B
13	Cover O-Ring	EPDM	-----
14	Stem Nut	Bronze	ASTM B584 C83600
15	Wedge	Gray Iron & EPDM	ASTM A126 CI B
16	Body - all types	Gray Iron	ASTM A126 CI B
17	Pipe Plug (Optional Some Styles)	Stainless Steel	-----

Complies with applicable requirements of AWWA C509

2"-12" R/S VALVE
MATERIAL LIST

CLOW VALVE COMPANY

MODEL 2639



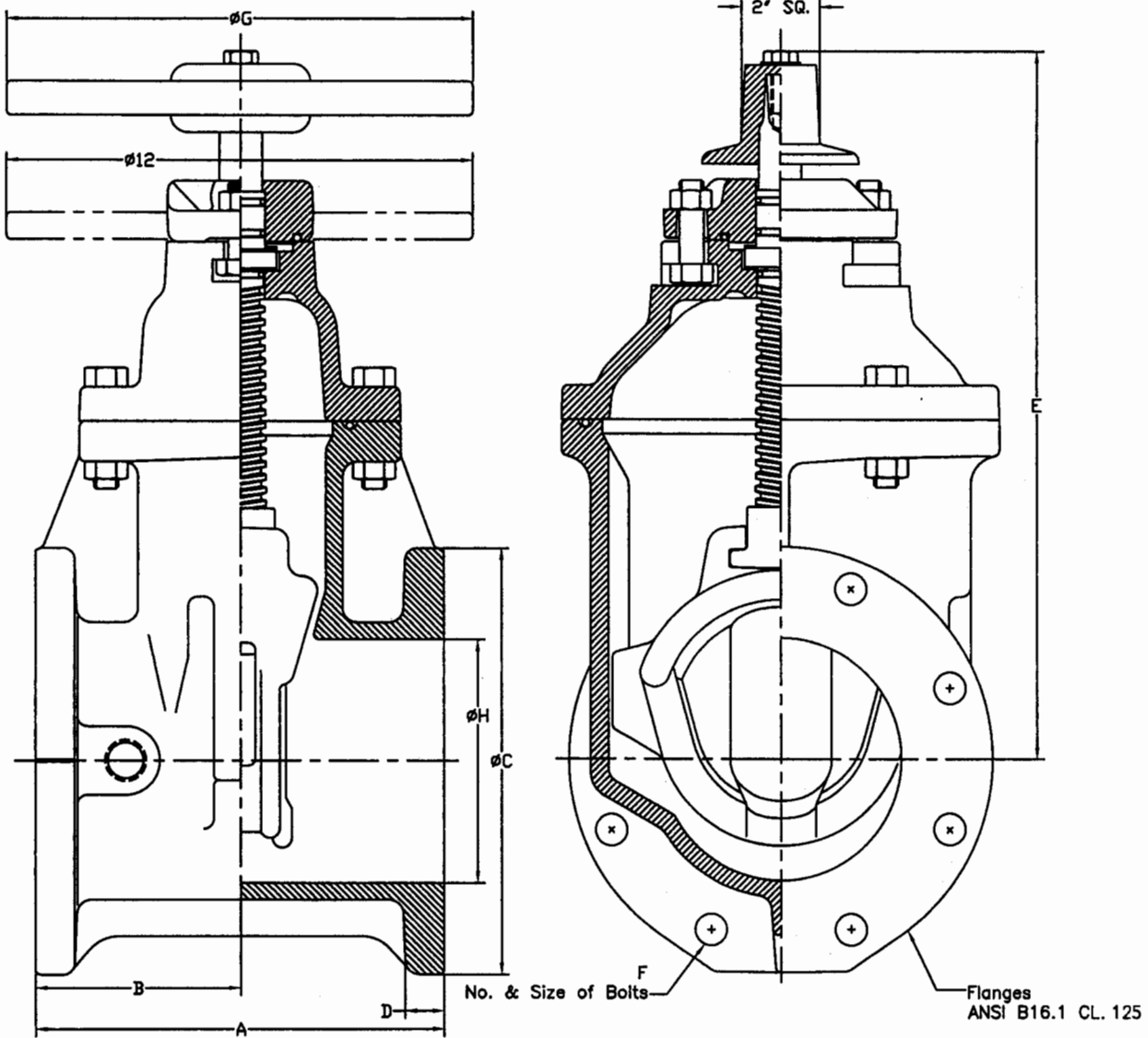
ITEM	DESCRIPTION	MATERIAL	ASTM SPEC.
1	Hex Head Bolt	Stainless Steel	ASTM F593 304 SST
2	Flat Washer	Stainless Steel	304 SST
3	Operating Nut	Gray Iron	ASTM A126 CI B
4	Hex Head Bolts & Nuts	Stainless Steel	ASTM F593/4 304 SST
5	Follower Plate	Ductile Iron	ASTM A536 65-45-12
6	Stem O-Ring	EPDM	-----
7	Follower Plate O-Ring/gasket	EPDM	-----
8	Thrust Washer Bearing	Delrin	-----
9	Hex Head Bolts & Nuts	Stainless Steel	ASTM F593/4 304 SST
10	Stem	Bronze	ASTM B584 C86700
11	Indicator Post Plate (Optional 3-12")	Gray Iron	ASTM A126 Class B
12	Cover	Ductile Iron	ASTM A536 65-45-12
13	Cover O-Ring	EPDM	-----
14	Stem Nut	Bronze	ASTM B584 C83600
15	Wedge	Gray Iron & EPDM	ASTM A126 CI B
16	Body - all types	Ductile Iron	ASTM A536 65-45-12
17	Pipe Plug (Optional Some Styles)	Stainless Steel	-----

2"-12" R/W VALVE FLANGED ENDS
GENERAL DIMENSION

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6102



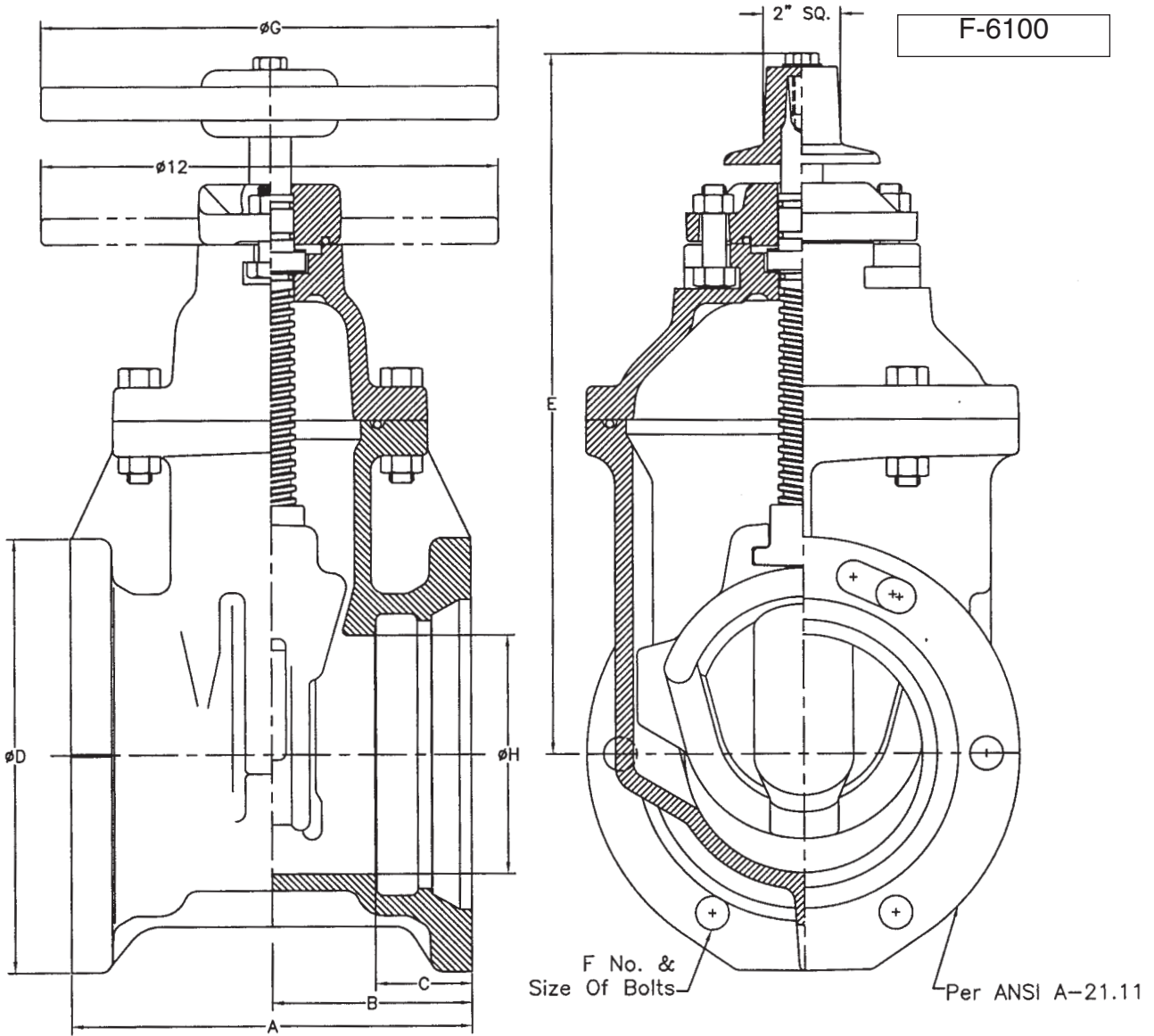
VALVE SIZE	A	B	C	D	E	F	G	H
2	7	3½	6	5/8	10½	4-5/8	7¼	2
2½	7½	3¾	7	1½/16	11¾	4-¾	7¼	2½
3	8	4	7½	¾	12¾	4-¾	10	3
4	9	4½	9	1½/16	14¾	8-¾	10	4¼
6	10½	5¼	11	1	19	8-¾	12	6¼
8	11½	5¾	13½	1½	22½	8-¾	14	8¼
10	13	6½	16	1¾/16	26½	12-7/8	18	10¼
12	14	7	19	1¼	30	12-7/8	18	12¼

Complies with applicable requirements of AWWA C509

2"-12" R/W VALVE MECHANICAL JOINT ENDS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640



VALVE SIZE	A	B	C	D	E	F	G	H
2	8 1/4	4 1/8	2 1/2	4 1/2	10 7/8	4-5/8	7 1/4	2
2 1/2	—	—	—	—	—	—	—	—
3	8 1/2	4 1/4	2 1/2	7 3/4	12 3/8	4-5/8	10	3
4	9 1/2	4 3/4	2 1/2	9 1/8	14 3/4	4-3/4	10	4 1/4
6	10 1/2	5 1/4	2 1/2	11 3/8	19	6-3/4	12	6 1/4
8	13 1/8	6 9/16	2 1/2	13 3/4	22 1/2	6-3/4	14	8 1/4
10	15 1/2	7 3/4	2 1/2	15 3/4	26 1/2	8-3/4	18	10 1/4
12	16	8	2 5/8	18	30	8-3/4	18	12 1/4

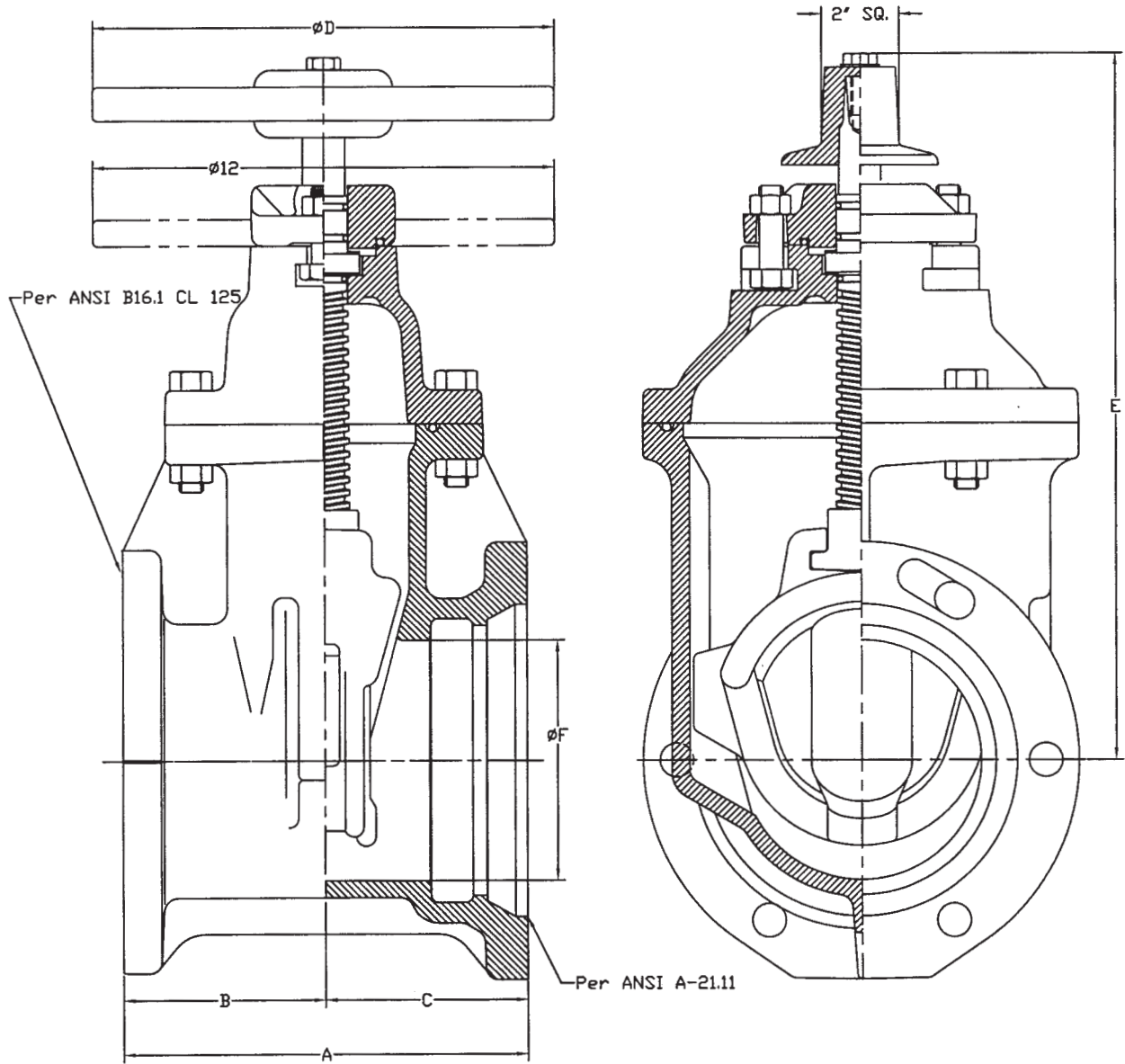
Valves comply with AWWA C509

3"-12" R/W VALVE NRS FLANGED x
MECHANICAL JOINT ENDS GENERAL
DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6106



VALVE SIZE	A	B	C	D	E	F
3	8 1/4	4	4 1/4	10	12 3/8	3
4	9 1/4	4 1/2	4 3/4	10	14 3/4	4 1/4
6	10 1/2	5 1/4	5 1/4	12	19	6 1/4
8	12 5/16	5 3/4	6 9/16	14	22 1/2	8 1/4
10	14 1/4	6 1/2	7 3/4	18	26 1/2	10 1/4
12	15	7	8	18	30	12 1/4

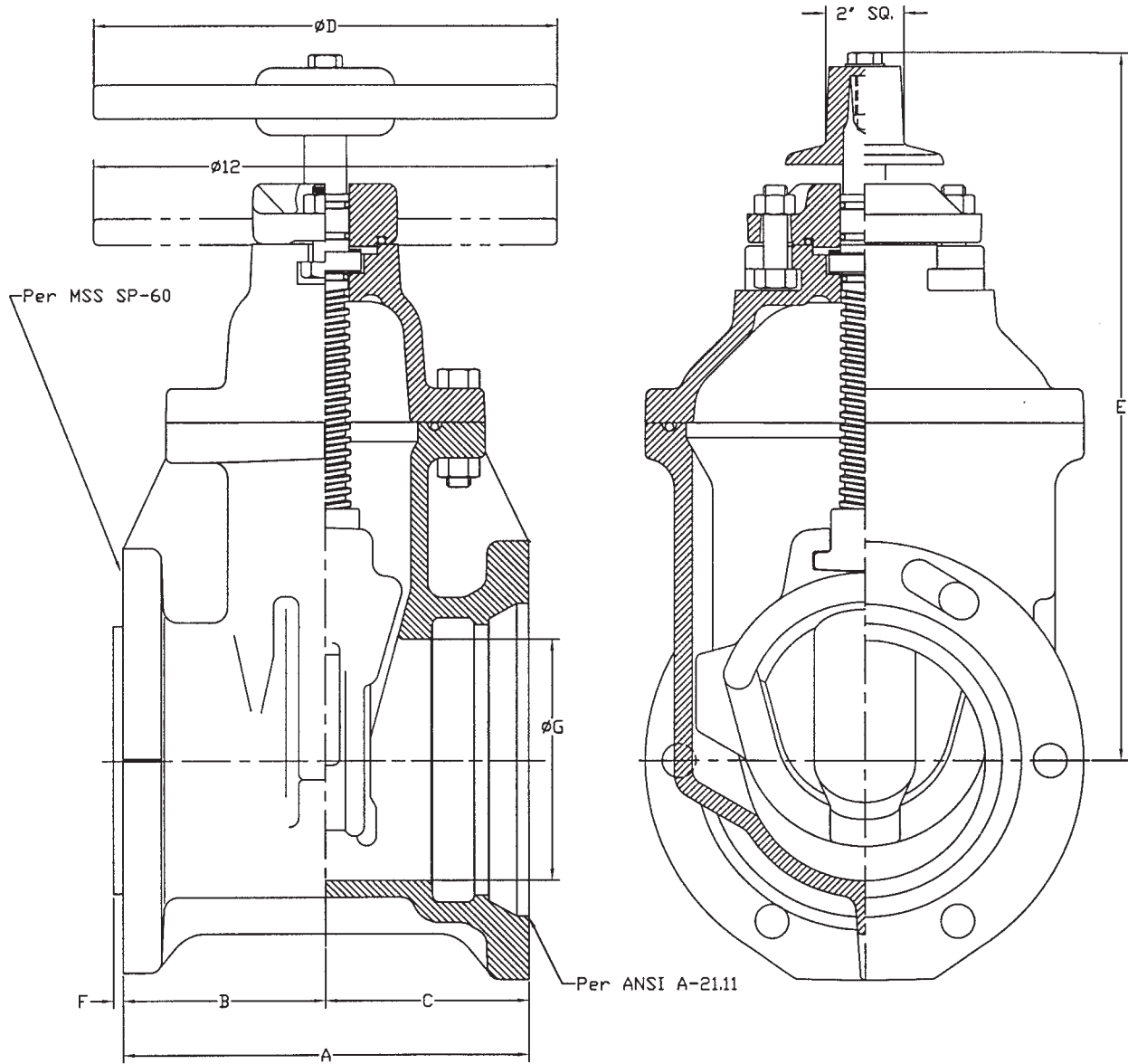
Valves comply with AWWA C509

3"-12" R/W VALVE NRS TAP x
MECHANICAL JOINT ENDS GENERAL
DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6114



VALVE SIZE	A	B	C	D	E	F	G
3	8 1/4	4	4 1/4	10	12 3/8	3/16	3
4	9 1/4	4 1/2	4 3/4	10	14 3/4	3/16	4 1/4
6	10 1/2	5 1/4	5 1/4	12	19	1/4	6 1/4
8	13 1/4	5 3/4	7 1/2	14	22 1/2	1/4	8 1/4
10	14 1/4	6 1/2	7 3/4	18	26 1/2	1/4	10 1/4
12	15	7	8	18	30	1/4	12 1/4

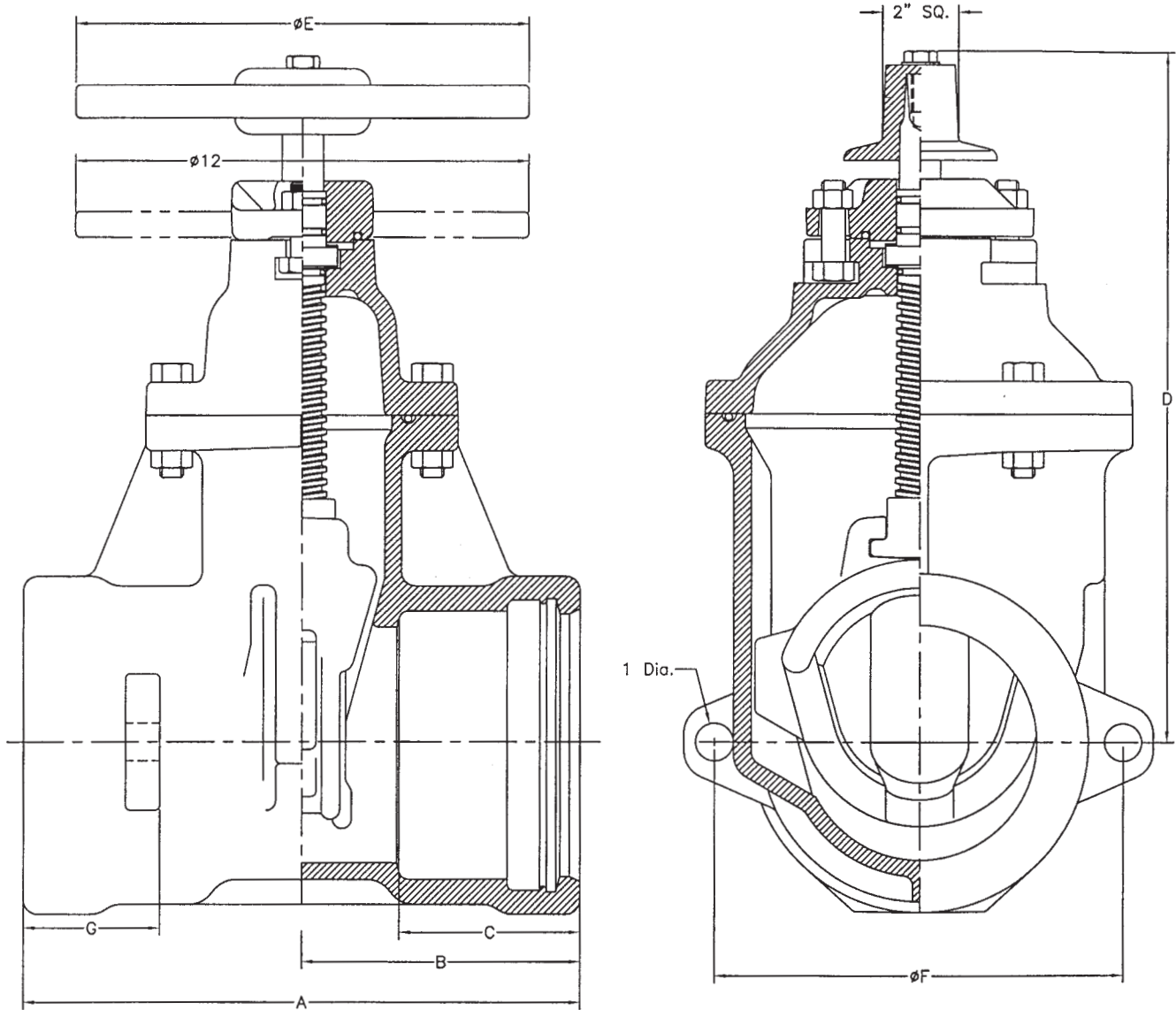
Complies with AWWA C509

4"-12" R/W VALVE TYTON ENDS
NRS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6112



VALVE SIZE	A	B	C	D	E	F	G
4	13 1/4	6 5/8	4.34	14 3/4	10	83/16	3 3/4
6	14 3/4	7 3/8	4.75	19	12	10 7/8	3 3/4
8	17 1/8	8 9/16	5.70	22 1/2	14	12 7/8	4 1/2
10	19 3/8	9 11/16	6.19	26 1/2	18	15 15/16	5 1/8
12	20 7/8	10 7/16	6.19	30	18	18 7/16	5 3/8

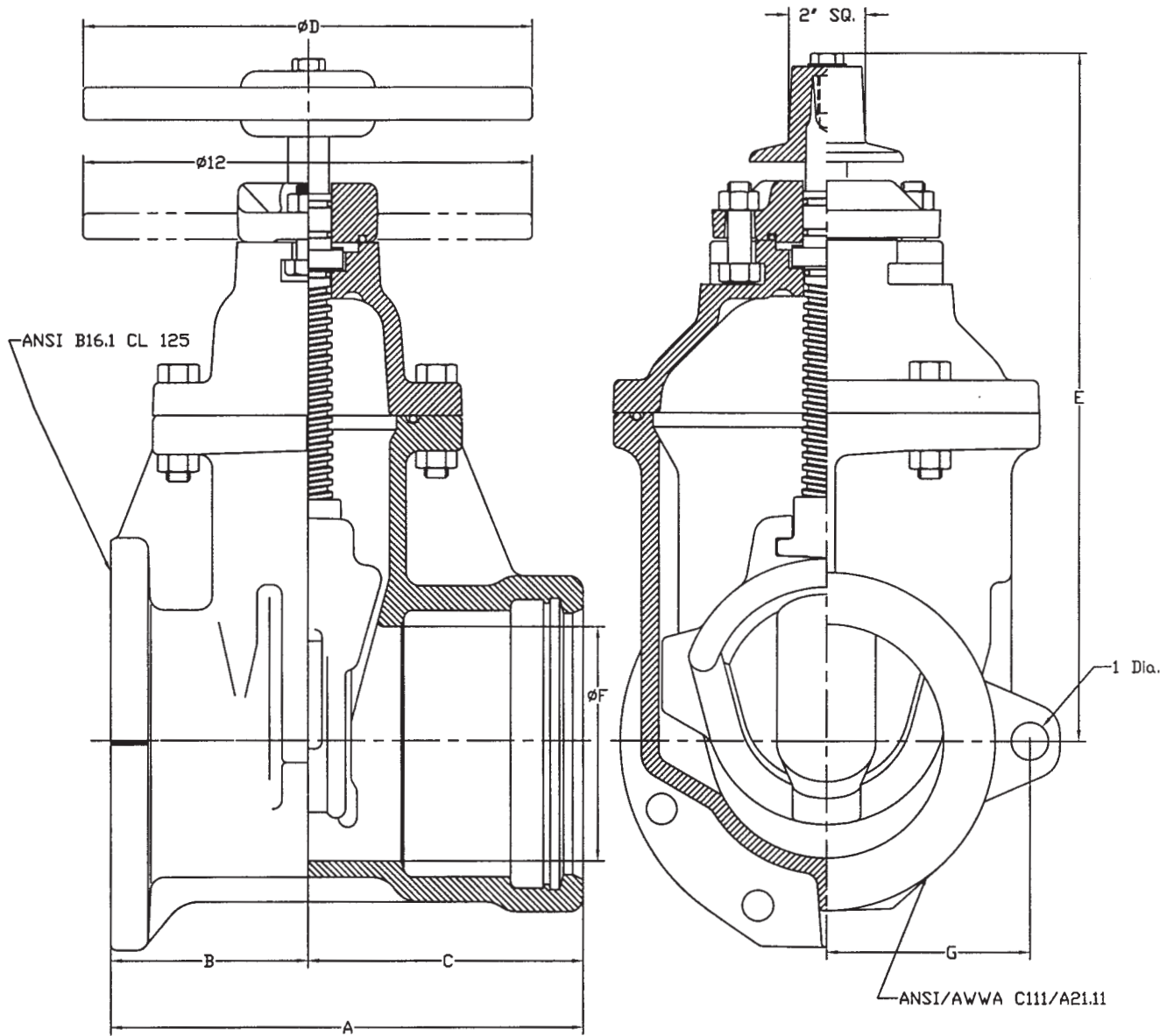
Valves comply with AWWA C509

4"-12" RW VALVE NRS FLANGE x
TYTON ENDS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6113



VALVE SIZE	A	B	C	D	E	F	G
3	8 1/4	4	4 1/4	10	12 3/8	3	----
4	11 1/8	4 1/2	6 5/8	10	14 3/4	4 1/4	4 3/32
6	12 5/8	5 1/4	7 3/8	12	19	6 1/4	5 7/16
8	14 5/16	5 3/4	8 9/16	14	22 1/2	8 1/4	6 7/16
10	16 3/16	6 1/2	9 11/16	18	26 1/2	10 1/4	7 31/32
12	17 7/16	7	10 7/16	18	30	12 1/4	9 7/32

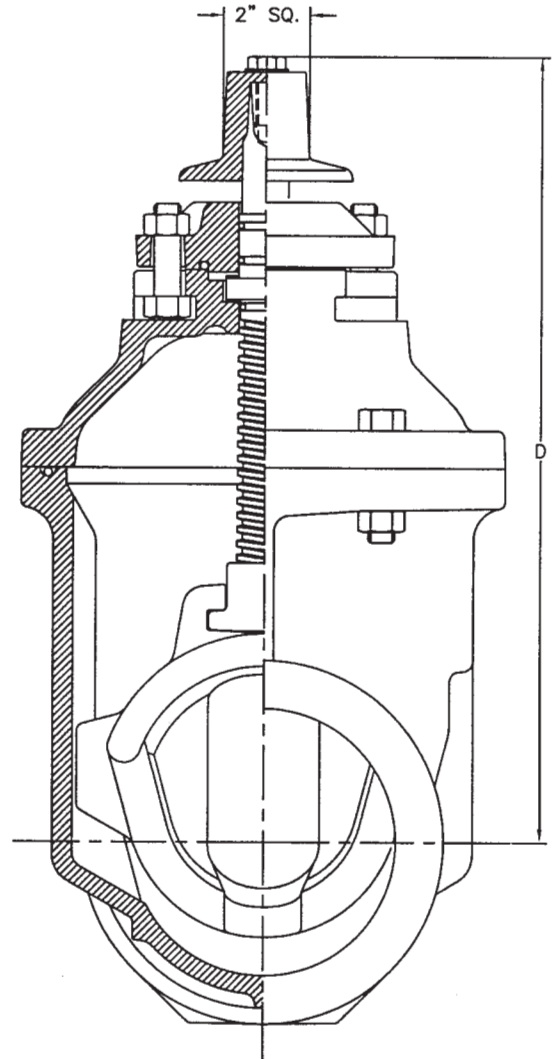
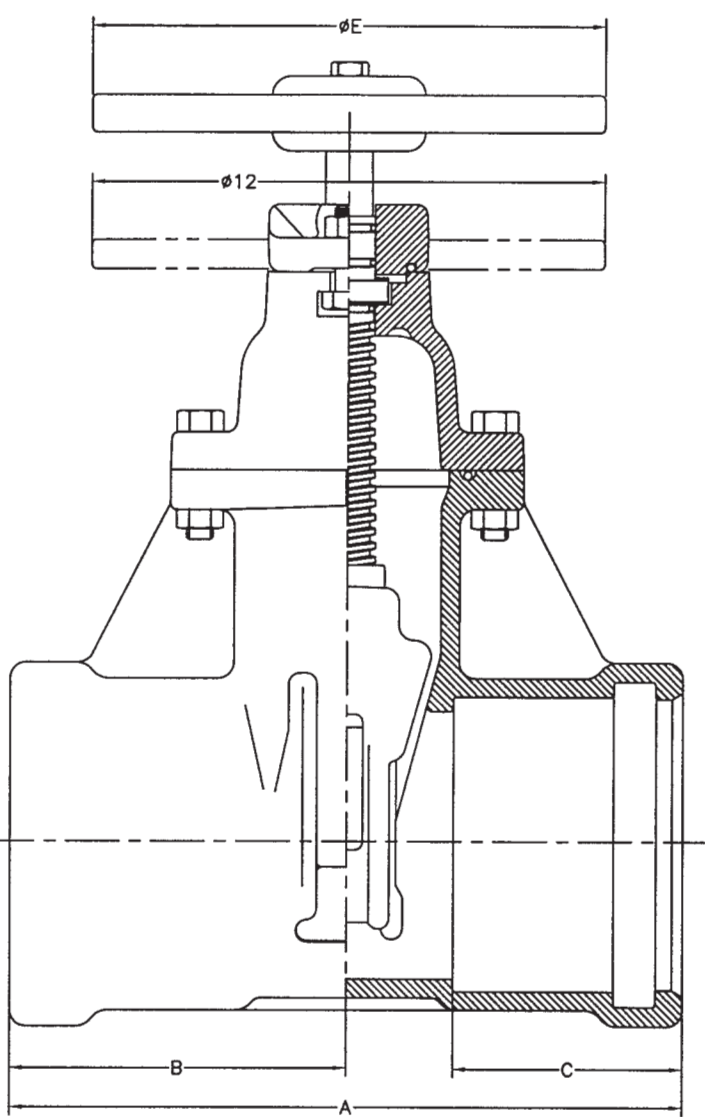
Complies with applicable requirements of AWWA C509

2"-8" R/W VALVE PVC ENDS
NRS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6110



VALVE SIZE	A	B	C	D	E
2	10	5	3 1/2	10 7/8	7 1/4
2 1/2	10 3/4	5 3/8	3 3/4	11 3/8	7 1/4
3	11 5/8	5 13/16	4 1/6	12 3/8	10
4	13 1/2	6 3/4	4 1/2	14 3/4	10
6	15 3/4	7 7/8	5 3/8	19	12
8	16 1/4	8 1/8	5 3/8	22 1/2	14

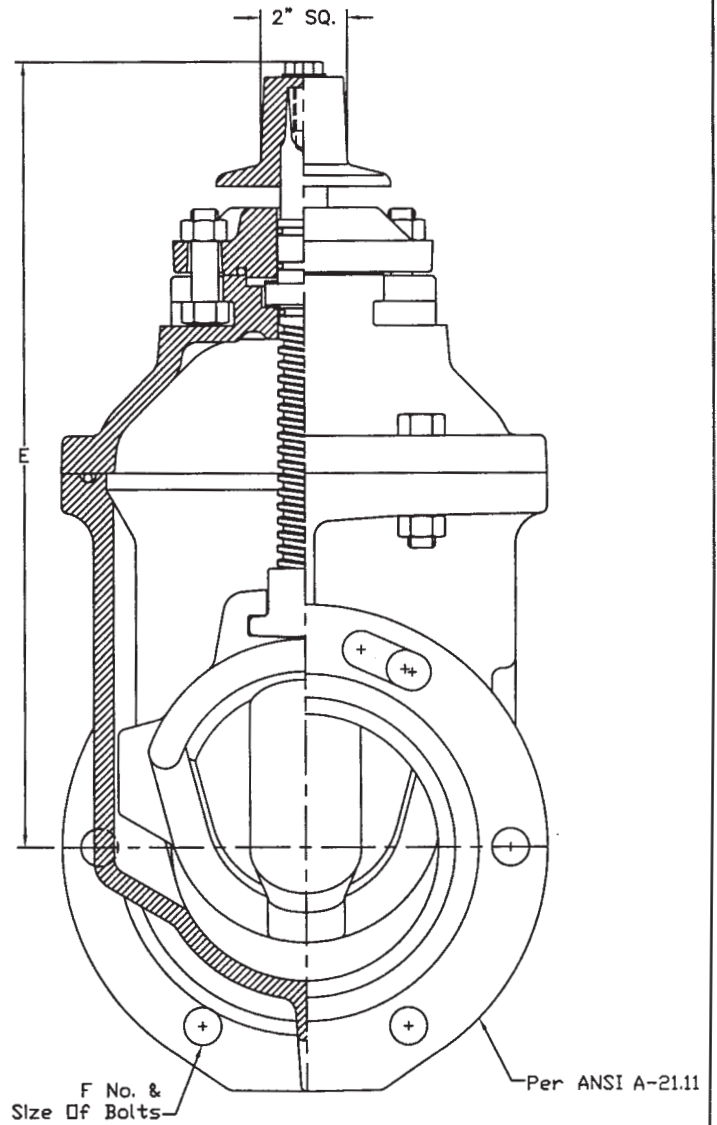
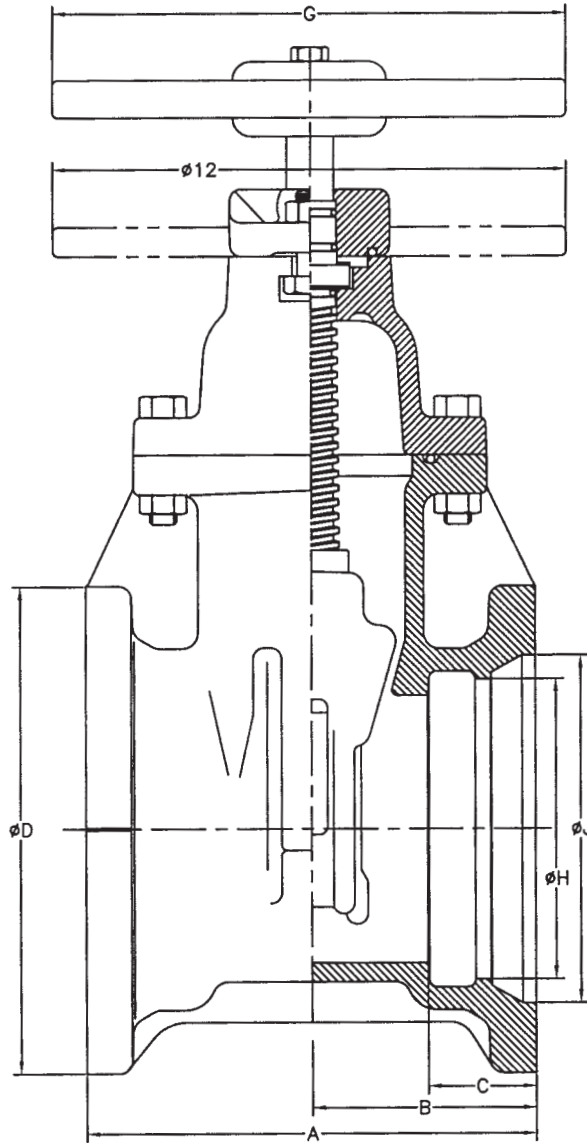
Complies with applicable requirements of AWWA C509

4"-12" R/W MECHANICAL CUT JOINT
(MCJ) ENDS
GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6111



VALVE SIZE	A	B	C	D	E	F	G	H	J
4	9 1/2	4 3/4	2 1/2	9 1/8	14 3/4	4-3/4	10	5.10	6.20
6	10 1/2	5 1/4	2 1/2	11 1/8	19	6-3/4	12	7.20	8.30
8	13 1/8	6 9/16	2 1/2	13 3/4	22 1/2	6-3/4	14	9.40	10.50
10	15 1/2	7 3/4	2 1/2	15 3/4	26 1/2	8-3/4	18	11.50	12.62
12	16	8	2 5/8	18	30	8-3/4	18	13.60	14.72

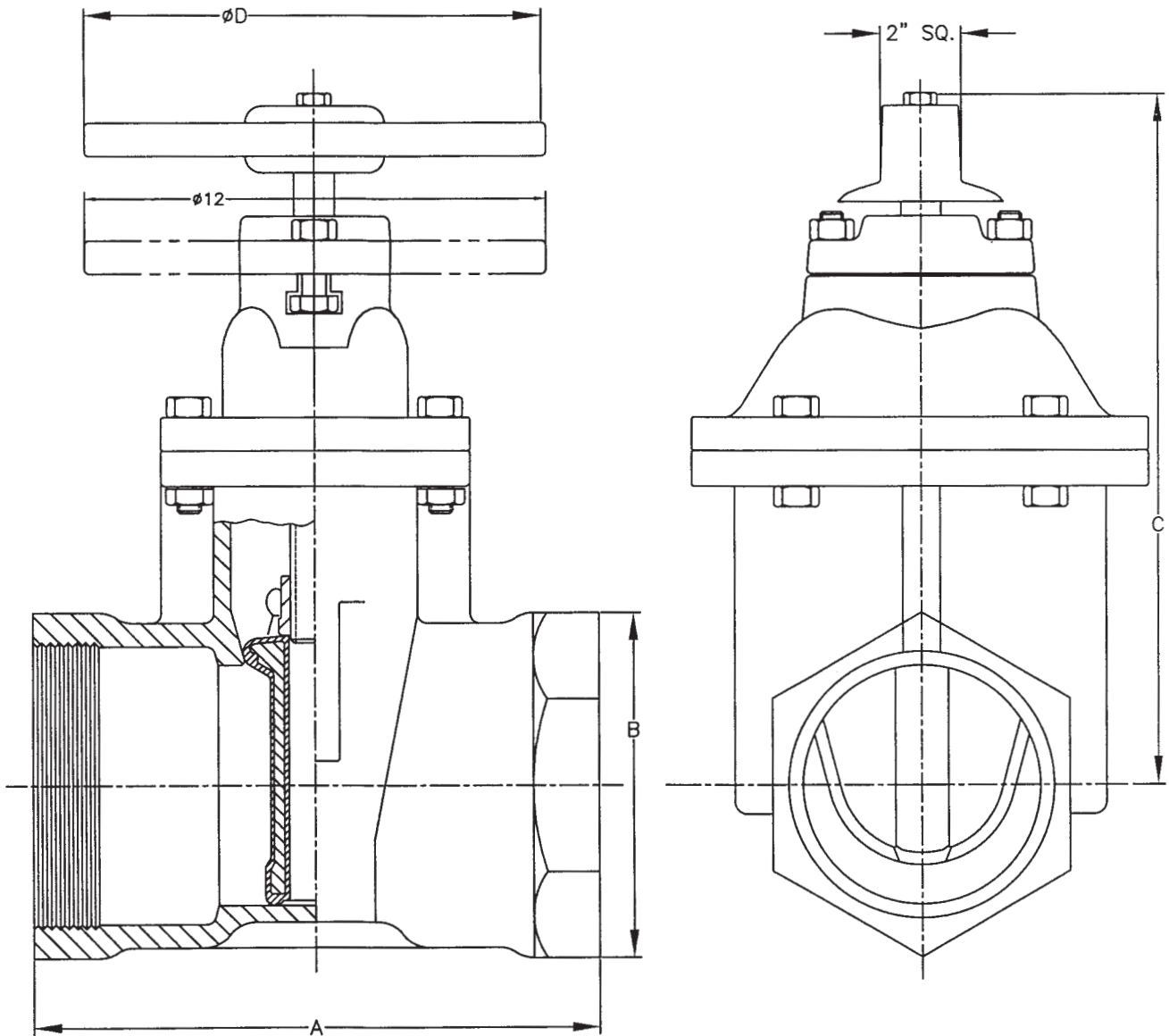
Complies with applicable requirements of AWWA C509

2"-3" R/W VALVE THREADED ENDS
NRS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639 & 2640

F-6103



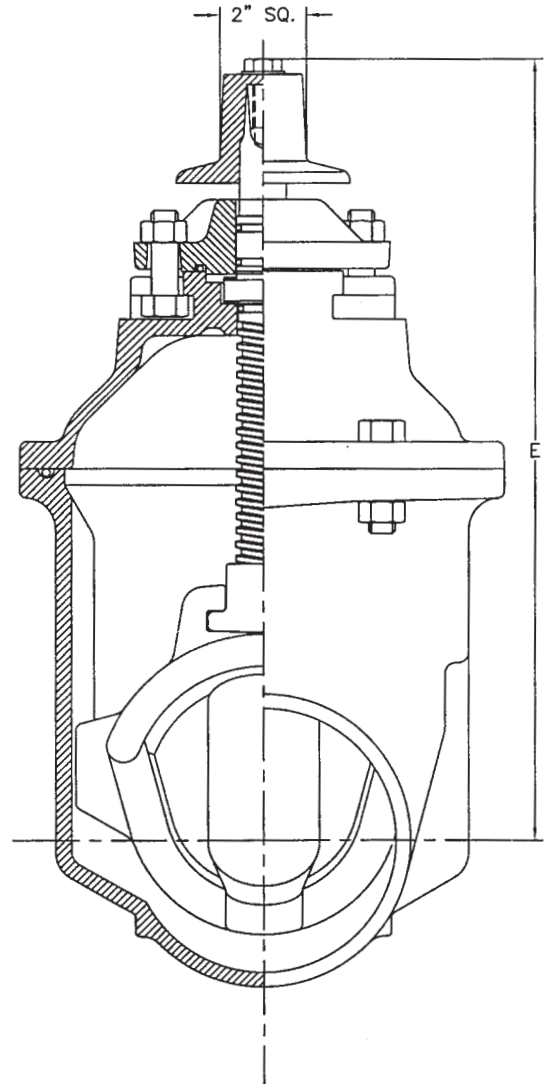
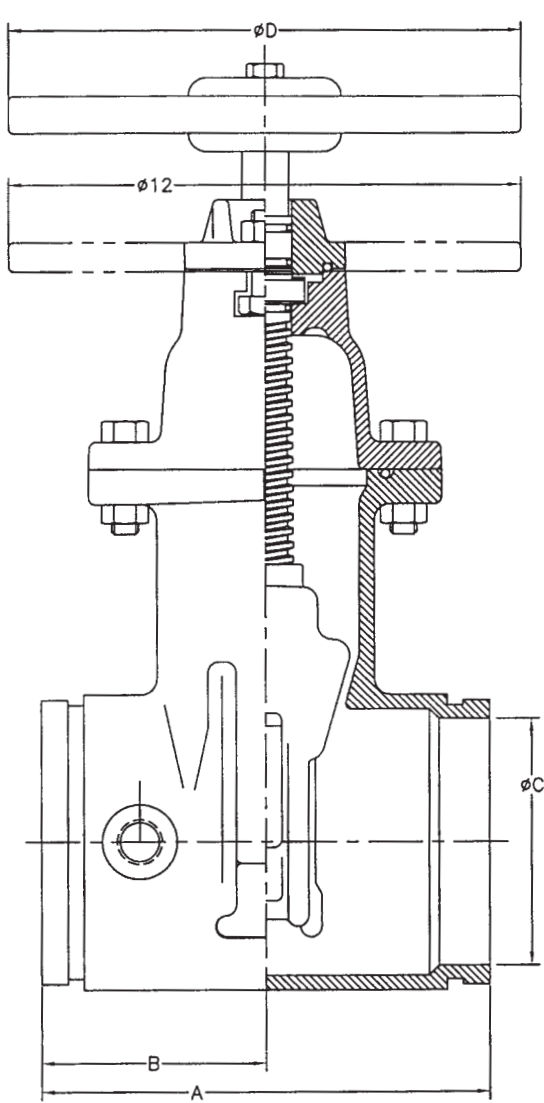
VALVE SIZE	A	B	C	D
2	5 1/4	4 1/8	10 7/8	7 1/4
2 1/2	7	5 3/16	11 3/8	7 1/4
3	7 1/8	5 5/8	12 3/8	10

Complies with applicable requirements of AWWA C509

2 1/2"-3" R/W VALVE GROOVE ENDS
NRS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639



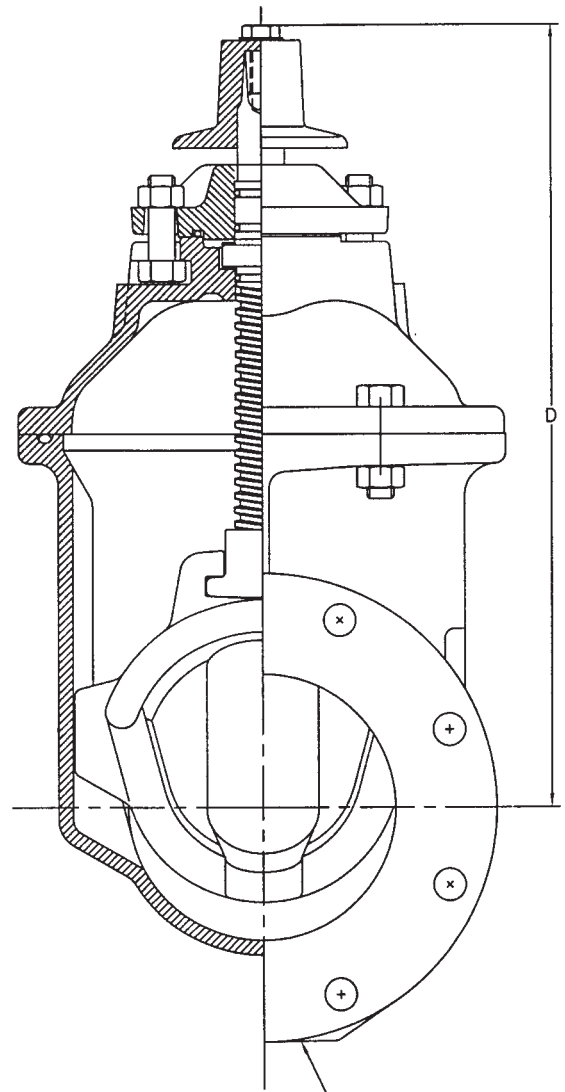
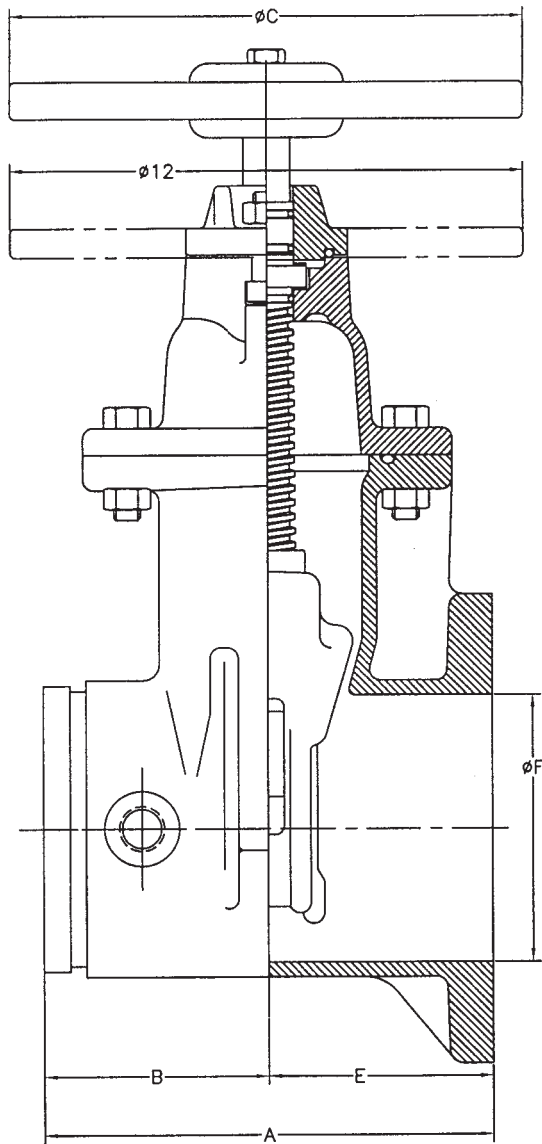
VALVE SIZE	A	B	C	D	E
2 1/2	7 1/2	3 3/4	1.97	7 1/4	10 7/8
3	8	4	2.63	10	12 3/8

Complies with applicable requirements of AWWA C509

2 1/2"-3" R/W VALVE GROOVE x FLANGE
NRS GENERAL DIMENSIONS

CLOW VALVE COMPANY

MODEL 2639



Flanges
ANSI B16.1 CL 125

VALVE SIZE	A	B	C	D	E	F
2 1/2	7 1/2	3 3/4	7 1/4	10 7/8	3 3/4	2 1/2
3	8	4	10	12 3/8	4	3

R/W VALVE
Material Specifications

CLOW VALVE COMPANY

CAST IRON Specification ASTM A126 Class B

Physical Properties

Minimum tensile strength	31,000 psi
Minimum transverse strength	3,300 lbs.
Minimum deflection (12" Centers)	.12 in

Chemical Analysis (percent)

Phosphorus (maximum)	.75
Sulfur (maximum)	.15

Ductile Iron ASTM A536

Minimum tensile strength	65,000 psi
Minimum yield strength	45,000 psi
Elongation	10-12 %

Urethane Rubber

Hardness	78±2
100% Modulus (PSI)	820
Tensile (PSI)	5,400
Elongation (%)	460

Seat Rubber (SBR)

Hardness	78±2
100% Modulus (PSI)	820
Tensile (PSI)	5,400
Elongation (%)	460
Compression Set, ASTM D395 Method B	18% max.

R/W VALVE
Material Specifications

CLOW VALVE COMPANY

STANDARD

CAST BRONZE—ASTM B584 CDA836 (Stem Nut)

Physical Properties	
Minimum tensile strength	30,000 PSI
Minimum yield strength	14,000 PSI
Minimum elongation (in 2 inches)	20%
Chemical Analysis	
Copper	84.0–86.0
Lead	4.0–6.0
Tin	4.0–6.0
Nickel (maximum)	1.0
Zinc	4.0–6.0

CAST BRONZE—ASTM B584 CDA867 (Stem)

Physical Properties	
Minimum tensile strength	80,000 psi
Minimum yield strength	32,000 psi
Minimum elongation (in 2 inches)	15%
Chemical Analysis	
Copper	55.0–60.0
Lead (maximum)	.50–1.5
Aluminum	1.0–3.0
Iron	1.0–3.0
Nickel (maximum)	1.0
Zinc	30.0–38.0
Manganese	1.0–3.5
Tin (maximum)	.2

ALTERNATE

CAST BRONZE—NDZ-S CA. NO. 995 (Stem)

Physical Properties	
Minimum tensile strength	70,000 psi
Minimum yield strength	40,000 psi
Minimum elongation (in 2 inches)	12%
Chemical Analysis	
Copper	82.8
Lead (maximum)	.25
Aluminum (maximum)	2.0
Iron (maximum)	5.5
Nickel (maximum)	5.5
Zinc (maximum)	2.0
Silicon (maximum)	2.0

4"-12" R/W VALVE UL/FM
Performance Information

CLOW VALVE COMPANY

MODEL 2639 & 2640

1. Valve complies with AWWA specs where applicable.
2. Valve complies with Underwriters Laboratory standard UL 262.
3. Valve is rated at 200 psi working pressure.
4. Valve is bubble-tight at all pressures up to full rated pressure (200 psi).
5. Valve is capable of bubble-tight seal at twice the rated pressure (400 psi) for short periods of time.
6. 2" thru 6" valve sizes have been hydrostatically shell tested at five (5) times the rated pressure (1000 psi).
7. 8", 10" and 12" valve sizes have been hydrostatically shell tested at four (4) times the rated pressure (800 psi).
8. Valve has been subjected to torques 150 percent of the designated minimum required torques.
9. Valve has been cycle tested 5,000 times without loss of bubble-tight seal.
10. Rubber to iron bond on wedge is inspected for strength as per ASTM D 429-73 specification.

For complete data on the tests
Underwriters Laboratories performed
reference UL File EX2697
Project 87NK7353

2"-12" R/W VALVE AWWA SERVICE

Performance Information

CLOW VALVE COMPANY

MODEL 2639 & 2640

1. Valve complies with AWWA C509 specs where applicable.
2. Valve is rated at 250 psi working pressure.
3. Valve is bubble-tight at all pressures up to full rated pressure (250 psi).
4. Valve is capable of bubble-tight seal at twice the rated pressure (500 psi) for short periods of time.
5. 2" thru 12" valve sizes have been hydrostatically shell tested at 2.5 times the rated pressure (625 psi).
6. Valve has been subjected to torques 150 percent of the designated minimum required torques.
7. Valve has been cycle tested 5,000 times without loss of bubble-tight seal.
8. Rubber to iron bond on wedge is inspected for strength as per ASTM D 429-73 specification.

R/W RESILIENT WEDGE GATE VALVE
Product Analysis

CLOW VALVE COMPANY

MODEL 2639 & 2640

Features	Benefits
Bubble Tight Closure at 250 psi (2"-12") (AWWA SERVICE)	<ul style="list-style-type: none">• No leakage—no loss of water
Smooth, Unobstructed Waterway	<ul style="list-style-type: none">• High flow characteristics• 100% smooth passage without turbulent flow• No sediment build-up• Will not impede travel of line cleaning tools
Only Three Internal Parts	<ul style="list-style-type: none">• Virtually maintenance free
No Seat Rings	<ul style="list-style-type: none">• Nothing to be damaged by scoring
Delrin* Anti-Friction Thrust Bearing	<ul style="list-style-type: none">• Operating torque to close and open held to absolute minimum
Solid, Bronze Stem Nut and High Strength Bronze Stem	<ul style="list-style-type: none">• No corrosion• Trouble-free service
Stem Nut is Self Centering	<ul style="list-style-type: none">• Eliminates possible stress on stem and wedge
Two "O" Ring Seals Above Stem Thrust Collar	<ul style="list-style-type: none">• Can be replaced with valve in service
High Strength Iron Wedge Fully Encapsulated with Rubber Permanently Bonded to Metal. Wedge Design Incorporates Two Seating Surfaces.	<ul style="list-style-type: none">• Trouble-free service with minimum maintenance• No leaks—no wear

*DuPont Trademark

**CR (CORROSION RESISTANCE)
COATING (INTERIOR & EXTERIOR)**

CLOW VALVE COMPANY

Clow CR Coating is a high performance, one-part, heat-curable, thermoset coating which provides superior corrosion resistance protection for metal parts.

Clow CR Coating material is a stable, non-toxic resin consisting of 100% solids. It is impervious to and imparts no taste to potable water. Clow CR Coating is formulated from materials deemed acceptable in the Food and Drug Administrations Document Title 21 of the Federal Regulations on food additives, Section 175.300 entitled "Resinous and Polymeric Coatings".

Clow CR Coating is applied by a heat application, fusion—bonding process which secures the coating material to the metal valve components. This process provides a continuous coating 9 mils thick with excellent adhesion qualities.

The durable Clow CR Coating has a hard finish and exhibits excellent corrosion resistance in most aqueous solutions and good abrasion resistance. It will not sag or cold flow or become soft during long-term storage. In addition to excellent corrosion resistance to aqueous solutions, the coating has excellent stability and resistance to acidic soil conditions.

Clow CR Coating meets the requirements of the American Water Works Association Standard C-550 entitled "Protective Interior Coatings for Valves and Hydrants". This high performance coating has a ten year history of satisfactory service as a corrosion protection coating used in corrosive potable water applications and soil conditions.

CR (CORROSION RESISTANCE) COATING

CLOW VALVE COMPANY

CHEMICAL	EPOXY RATING		CHEMICAL	EPOXY RATING	
	70°F	180°F		70°F	180°F
ACIDS:			ALKALIES:		
Acetic, 10%	F	N	Ammonium Hydroxide	E	G
Benzene Sulfonic, 10%	E	E	Calcium Hydroxide	E	E
Benzoic	E	E	Potassium Hydroxide	E	E
Boric	E	E	Sodium Hydroxide	E	E
Chloracetic, 10%	E	E	ACID SALTS:		
Chromic, 5%	F	N	Aluminum Sulfate	E	E
Citric, 10%	E	N	Ammonium Chloride*	E	E
Fatty Acids	E	E	Copper Chloride*	E	E
Formic, 90%	E	F	Iron Chloride*	E	E
Hydrobromic, 20%	G	G	Nickel Chloride*	E	E
Hydrochloric, 20%	E	G	Zinc Chloride*	E	E
Hydrocyanic	E	E	ALKALINE SALTS:		
Hydrofluoric, 20%	G	G	Barium Sulfide	E	E
Hypochlorous, 5%	F	N	Sodium Bicarbonate	E	E
Lactic, 5%	F	N	Sodium Carbonate	E	E
Maleic, 25%	E	E	Sodium Sulfide	E	E
Nitric, 5%	E	G	Trisodium Phosphate	E	E
Nitric, 30%	G	P	NEUTRAL SALTS:		
Oleic	E	E	Calcium Chloride*	E	E
Oxalic	E	E	Magnesium Chloride*	E	E
Phosphoric	G	F	Potassium Chloride*	E	E
Picric	G	F	Sodium Chloride*	E	E
Steric	E	E	SOLVENTS:		
Sulfuric, 50%	G	F	Alcohols	E	E
Tannic	E	E	Aliphatic Hydrocarbons	E	E
			Aromatic Hydrocarbons	E	E
Ketones	F	F	Benzene	E	E
Ethers	F	F	Formaldehyde, 37%	E	G
Esters	F	F	Phenol, 5%	G	F
Gasoline	E	E	Mineral Oils	E	E
Carbon Tetrachloride	E	E	Vegetable Oils	E	E
Organics:			Chlorobenzene		
Aniline	G	P			

KEY: E - no attack
 G - appreciably no attack
 F - some attack, but useable in some instances
 P - attacked, not recommended for use
 N - rapidly attacked
 * - and nitrate and sulfate

2" THRU 12" R/W VALVE
Flow Coefficients

CLOW VALVE COMPANY

MODEL 2639 & 2640

VALVE SIZE	Cv (FULL OPEN)	K (FULL OPEN)
2	300	0.15
2½	500	0.130
3	800	0.115
4	1500	0.105
6	3600	0.090
8	6700	0.080
10	10,500	0.080
12	15,000	0.080

$$Cv = \sqrt{\frac{Q}{\Delta P}} \quad K = f \frac{L}{D}$$

Values given are calculated, based on
hydraulic lab tests on 6" R/W valve.

RESILIENT WEDGE GATE VALVES

Recommended Specifications

CLOW VALVE COMPANY

MODEL 2639 & 2640

Valves shall conform to the latest revision of AWWA Standard C-509 covering resilient wedge gate valves.

The valves shall be either, **non-rising stem or rising stem**, opening by turning stem **left or right** and provided with **2" square operating nut or handwheel** with the word **Open** and an **Arrow** cast in the metal to indicate direction to open.

The wedge shall be of cast iron completely encapsulated with rubber.

The sealing rubber shall be permanently bonded to the cast iron wedge to meet ASTM tests for rubber metal bond ASTM D429.

Stems for NRS assemblies shall be cast bronze with integral collars in full compliance with AWWA. OS & Y stems shall be bronze. The NRS stem stuffing box shall be the o-ring seal type with two o-rings located above thrust collar and one o-ring below. The two o-rings above the thrust collar shall be replaceable with valve fully open and subjected to full rated working pressure.

There shall be two low torque thrust bearings located above and below the stem collar. The stem nut shall be independent of wedge and shall be made of solid bronze. There shall be a smooth unobstructed waterway free of all pockets, cavities and depressions in the seat area.

The body and bonnet shall be coated with fusion bonded epoxy both interior and exterior, complying with AWWA C550 and be NSF 61 approved. Each valve shall have maker's name, pressure rating and year in which manufactured cast on the body. Prior to shipment from factory, each valve shall be tested by hydrostatic pressure equal to requirement for both AWWA (twice the specified working pressure) and 400 PSI ULFM requirements.