

Fabri-Valve®

# F71 Wedge Gate Valve



**ITT**

ENGINEERED FOR LIFE

# F71 Wedge Gate Valve

The fabricated, bolted bonnet, Fabri Valve Figure F71, OS and Y wedge gate valve is an economical alternative when full ANSI rated valves are not required. In addition, the ability to select construction materials piece by piece can often result in substantial savings. The integral gate guides provide positive guidance of the wedge throughout the stroke of the valve.

## Testing

Every Fabri-Valve wedge gate valve is fully tested prior to shipment. Testing includes a body shell test, a seat test and a cycling test to insure proper functioning of moving parts. Additional testing is also available. Please let us know your requirements.

### Shell test:

Hydro test at 1.5 times the rated CWP (cold working pressure) — zero allowable leakage

**Seat test: Metal seat** — Hydro test at 10 psi (0.7 bar) and rated CWP - allowable leakage:

3" – 24" 10cc/hour/inch of valve size

Above 24" consult factory

Hardfaced seats all sizes consult factory

**Seat test: Resilient seat** — Hydro test at 15 psi (1 bar) and rated CWP — allowable leakage as follows:

### "D" ring resilient seat (excluding PTFE)

All sizes zero leakage

### "D" ring PTFE seat

All sizes consult factory

## Specifications

**Size Range** 3" – 84"

**Pressure Rating:** 3" – 24", 150 psi (10.3 bar) CWP (cold working pressure). Consult factory for higher pressure designs up to 750 psi (51.7 bar). Above 24", designed to customer requirements.

**Temperature Rating:** 500°F (260°C) standard, Consult factory for applications to 1500°F (816°C).

Service temperatures above 400°F (204°C) require high temperature fasteners. Specify service temperature on paperwork

## Materials of Construction

Part	Materials	
	F71R	F71S
Wetted Body and Chest Components	Stainless steel type 304, 316 or 317L	Stainless steel type 304, 316 or 317L
External Flanges and Stiffeners	Carbon steel with stainless steel gasket surface	Solid stainless steel
Seats	Stainless steel	Stainless steel
Gate	Stainless steel	Stainless steel
Yoke	Carbon steel	304 stainless steel
Yoke Bolting	Plated steel	Stainless steel
Packing	PTFE-Graphite	PTFE-Graphite
Packing Follower	Carbon steel/ductile iron	316 stainless steel
Follower Bolting	Plated steel	Stainless steel
Stem	Stainless steel	Stainless steel
Stem Nut	Acid resistant bronze	Acid resistant bronze
Lubrication Fitting	Plated steel	Plated steel
Handwheel	24" and above carbon steel 2" – 20" cast iron	24" and above carbon steel 2" – 20" cast iron
Handwheel Retaining Nut	Malleable iron	Stainless steel
Tab Washer	Stainless steel	Stainless steel

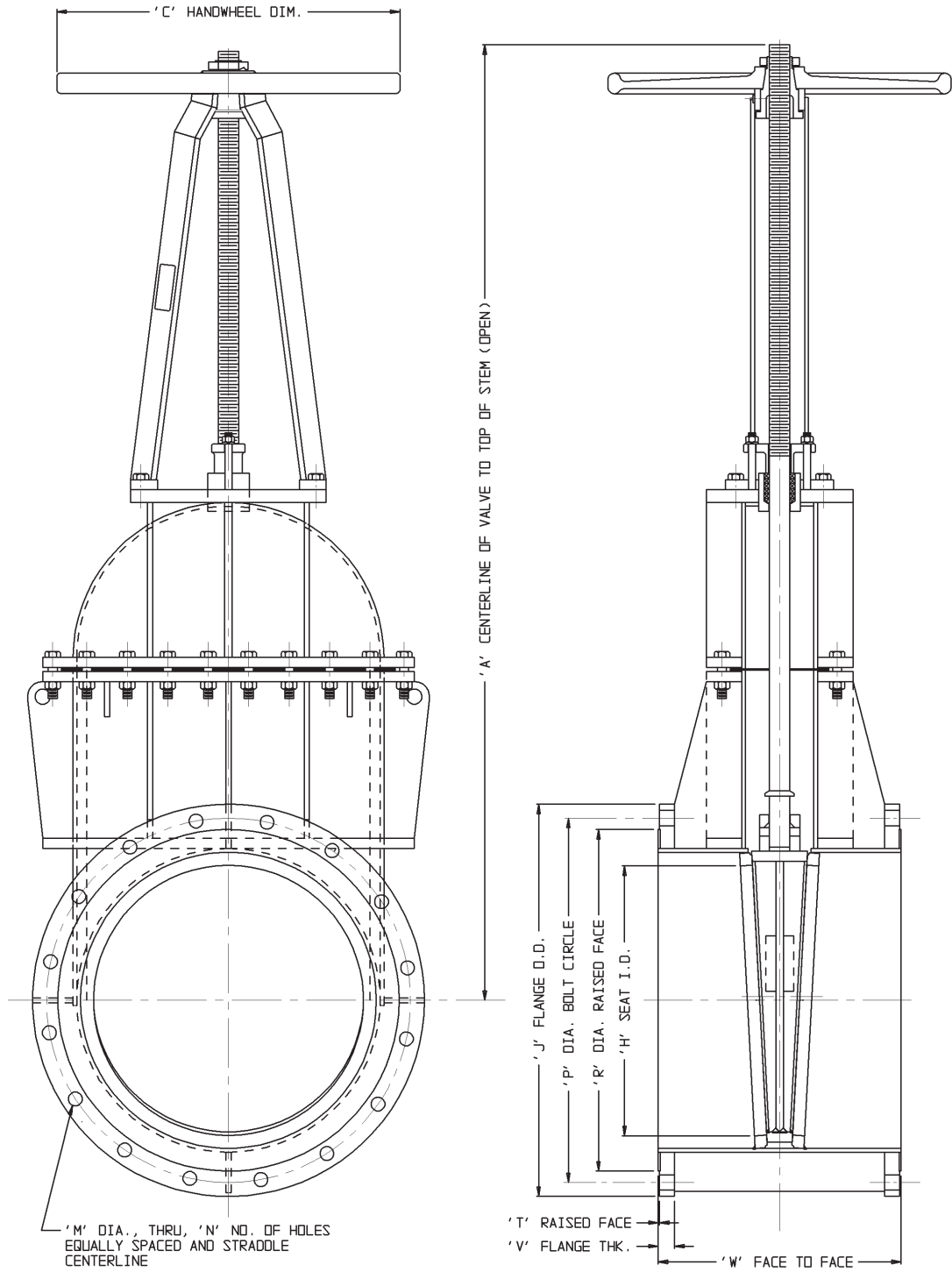
## Dimensions

Valve Size		DIMENSION Inches (mm) F71 with HANDWHEEL											Weight *	
Inches	DN	A	C	H	J	M	N	P	R	T	V	W	lb	kg
3	80	19-5/6 (491)	12 (305)	2-1/2 (64)	7-1/2 (191)	3/4 (19)	4	6 (152)	FLAT FACE		5/8 (16)	8 (203)	57	26
4	100	21-3/4 (552)	12 (305)	3-1/2 (89)	9 (229)	3/4 (19)	8	7-1/2 (191)	6-3/16 (157)	1/16 (14)	9/16 (14)	9 (229)	70	32
6	150	29-3/8 (746)	12 (305)	5-15/16 (151)	11 (279)	7/8 (22)	8	9-1/2 (241)	8-1/2 (216)	1/16 (2)	11/16 (17)	10-1/2 (267)	100	45
8	200	38-13/16 (986)	16 (406)	7-15/16 (202)	13-1/2 (343)	7/8 (22)	8	11-3/4 (298)	10-5/8 (270)	1/16 (2)	13/16 (21)	11-1/2 (292)	144	65
10	250	45-5/8 (1159)	16 (406)	9-15/16 (252)	16 (406)	1 (25)	12	14-1/4 (362)	12-3/4 (324)	1/16 (2)	13/16 (21)	13 (330)	209	95
12	300	55 (1397)	20 (508)	12-3/16 (310)	19 (483)	1 (25)	12	17 (432)	15 (381)	1/8 (3)	7/8 (22)	14 (356)	317	144
14	350	55 (1397)	20 (508)	12-3/16 (310)	21 (533)	1-1/8 (29)	12	18-3/4 (476)	16-1/4 (413)	1/8 (3)	7/8 (22)	15 (381)	347	157
16	400	68-1/16 (1729)	20 (508)	14-5/16 (379)	23-1/2 (597)	1-1/8 (29)	16	21-1/4 (540)	18-1/2 (470)	1/8 (3)	1-1/8 (29)	16 (406)	596	270
18	450	75-15/16 (1929)	20 (508)	16-5/16 (414)	25 (635)	1-1/4 (32)	16	22-3/4 (578)	21 (533)	7/8 (3)	1-1/8 (29)	17 (432)	702	318
20	500	83-1/2 (2121)	20 (508)	18-1/16 (459)	27-1/2 (699)	1-1/4 (32)	20	25 (635)	23 (584)	1/8 (3)	1-1/8 (29)	18 (457)	816	370
24	600	101 (2565)	30 (762)	21-1/2 (546)	32 (813)	1-3/8 (35)	20	29-1/2 (749)	27-1/4 (692)	1/8 (3)	1-1/8 (29)	20 (508)	1196	542

\* Figures F71R and F71S with Handwheel

Reference Dimensions in (parentheses)

# F71 with Handwheel



with Handwheel

## Flow Coefficients

The Cv values below represent U.S. gallons per minute 60°F water through a 100% open valve at a pressure drop of 1 psi. The metric equivalent, Kv, is the flow of water at +16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm<sup>2</sup>. To convert Cv to Kv, multiply the Cv by 0.8569.

Figure F71 Wedge Gate Valves				
Cv Ratings, Port Diameter and Area				
Valve Size		Standard Port		
In.	DN	Cv	Port I.D. Inches	Port Area Sq. In.
3	75	438	2.50	4.9
4	100	858	3.50	9.6
6	150	2,540	5.94	27.7
8	200	4,540	7.94	49.5
10	250	7,114	9.94	77.6
12	300	10,700	12.19	115.4
14	350	10,400	12.19	115.4
16	400	14,340	14.31	160.8
18	450	18,620	16.31	208.9
20	500	22,830	18.06	256.2
24	600	32,350	21.50	363.0

## Available Options

- Jack Screws
- Bottom Clean-outs

## Pressure/Temperature Ratings

The table below is the Maximum Pressure/Temperature Ratings for the metallic components only. When checking pressure/temperature ratings, check the temperature rating and chemical compatibility of the packing material, and if applicable, the resilient seat material. In a majority of valve designs, the temperature limit or the chemical compatibility of the seat and/or packing material determines the practical pressure/temperature limitations.

Figure F71 Pressure/Temperature Rating - psi								
Temp		304	304L	316	316L	317L	A 36	A516Gr70
°F	°C							
150	66	150	133	150	133	150	150	150
200	93	133	114	141	113	135	137	150
250	121	126	108	133	107	128	135	150
300	149	120	102	124	101	121	133	150
350	177	115	98	119	97	116	131	150
400	204	110	93	114	93	112	128	150
450	232	107	90	110	90	108	125	150
500	260	103	87	106	87	105	121	150
600	316	97	82	101	83	100	111	150
700	371	94	80	97	80	96	108	142
800*	427*	89	77	93	77	92		103
900*	482*	87		92				57
1000*	538*	83		90				21
1100*	593*	78		88				
1200*	649*	49		59				
1300*	704*	30		33				
1400*	760*	18		18				
1500*	816*	11		10				

\* "R" Series valves have alloy steel wetted parts and a carbon steel exterior. Standard "R" Series valves are limited to 700°F (371°C); however alternate "R" Series constructions are available to 1000°F (538°C)

NOTE: Each valve is identified by Size-Figure-Series-etc. The "How To Order" section explains the Valve Model Codes.



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Form F71