

# SLAB GATE VALVES, CLASS 1500

## THE ENERGY CONTROLLERS

WALWORTH Slab Gate Valves also named “Through Conduit Gate Valve” are manufactured and tested in accordance with the API-6D standard. This type of valve is very useful in transportation pipe lines for gas, crude oil and oil products. The Slab Gate Valve is through conduit and piggable. Slab Gate Valve has been designed to minimize pressure drop and catch foreign materials such as slurries into the disc cavity to keep clean the sealing surface areas.

### FULL OPENING THROUGH CONDUIT DESIGN: WALWORTH

Slab Gate valve allow the pipeline fluids to flow freely with a minimum of turbulence. In open position, Slab Gate allows the running of pigs, scraper wipers or hot tap cutters through the pipeline with no danger or damage to the internal mechanic components of the valve. Full-flow design keeps line scrapers from becoming stuck into the valve’s bore and prevents metal cuttings from jamming moving parts. Circular bore as per API-6D table 1.

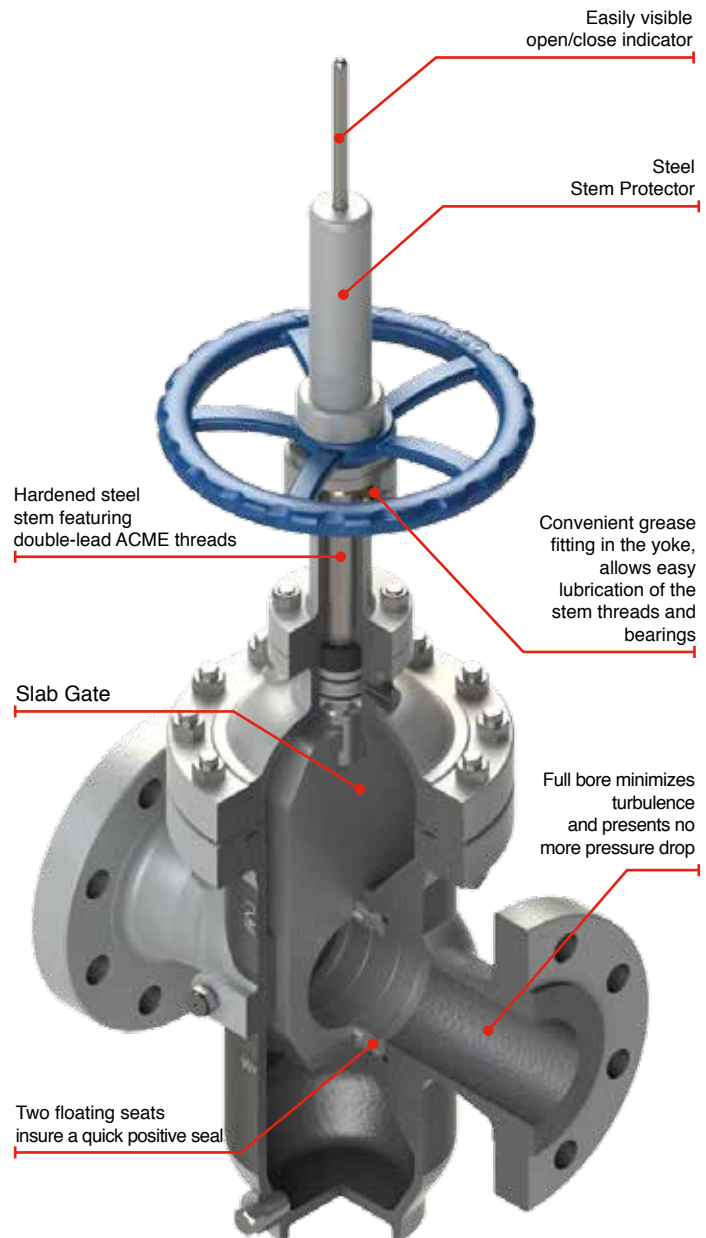
**ENERGIZED SEAT FOR POSITIVE SEALING:** When the slab-type disc is in the closed position, the seats (one on each side of the gate) are energized to have a tight seal upstream and downstream. The valve seats have a nylon or RPTFE (Reinforced PolyTetraFluoroEthylene resine) circular insert on their sealing faces. Two elastomer O-rings on the peripheral surfaces of the seats prevent the fluid passing through the seats when the valve is expanded due to pressure. In this way, the sealing action of the O-rings actually increases with fluid pressure.

**TIGHT SEALING:** WALWORTH Slab Gate Valve uses the resultant force from the pressure line to help to have a mechanical tight sealing downstream side when high differential pressure occurs. Low pressure sealing is achieved by internal springs assisting pushing the seats against the disc to obtain the proper seal.

**MAINTENANCE:** Slab Gate valves are designed for free maintenance. The combination Chevron-Viton packing in the valve stem can be repacked while the valve is under pressure in open position. Slab Gate valves can be overhauled by trained serviceman or by the manufacturer.

**NO LUBRICATING:** In normal operating conditions, the Slab Gate valve does not need lubricant to maintain a seal. If damage occurs to sealing members, sealant can be injected as a temporary solution until valve is repaired.

**BACKSEAT:** Slab Gate Valve is designed with backseat bushing to keep packing chamber isolated for pressure line to permit packaging change. Also a secondary seal inside the packing chamber is included.



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## (HANDWHEEL OPERATED)

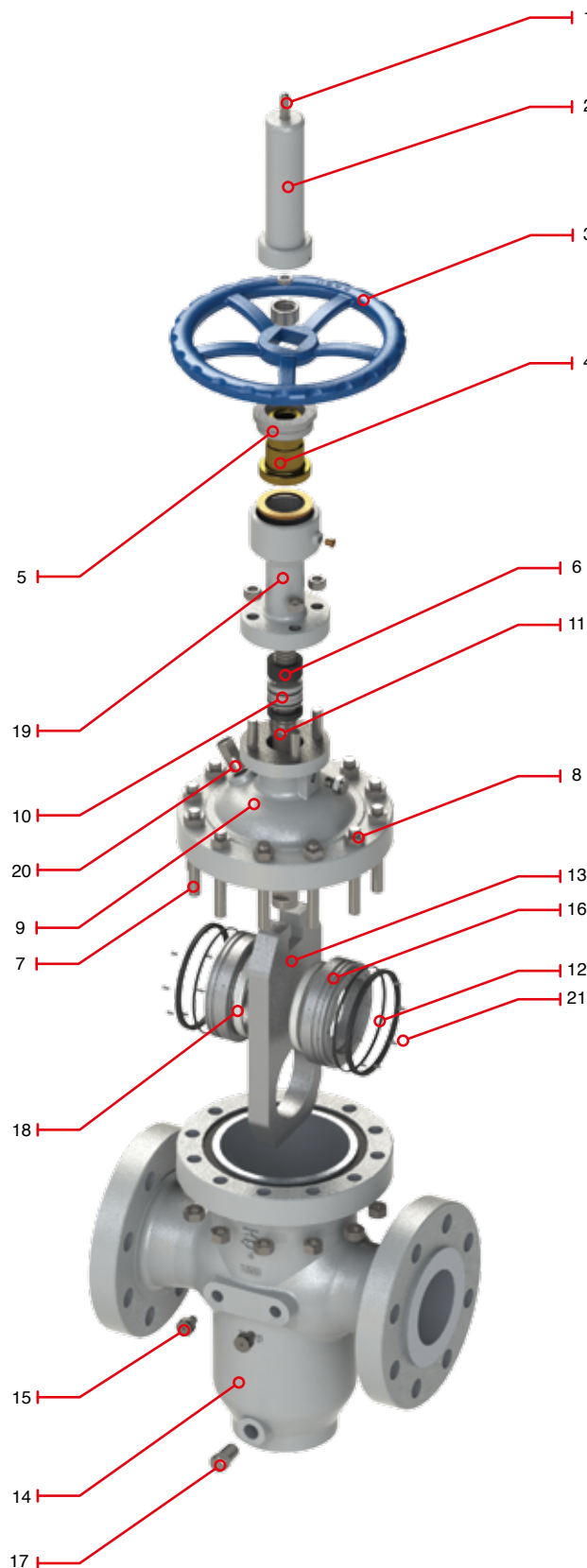
### DESIGN FEATURES:

- Design in accordance with API-6D
- Rising stem
- Flange dimensions as per ASME B16.5
- For valves 26" and larger, flange dimensions as per ASME B16.47 Series A
- End to end dimensions as per API-6D table 2 and figure 2 (valves not listed in this table as per ASME B16.10)
- WE dimensions as per ASME B31.4 and/or ASME B31.8 and tapered as per ASME B16.25 figure 1
- Full opening
- Size from 2" to 4" Handwheel operated as standard

FIGURE No.	OPERATION	TYPE ON ENDS
5912	Handwheel	RF
5913	Handwheel	RTJ
5914	Handwheel	WE

### Regular Bill of Materials

No.	Description	Standard Material
1	Indicator Rod	SS 410
2	Stem Protector	CS
3	Handwheel	A197
4	Stem Nut	ASTM A439 D2
5	Thrust Bearing	AISI 1035
6	Stem Packing	Graphite
7	Bolt	ASTM A193 Gr. B7M
8	Nut	ASTM A194 Gr. 2HM
9	Bonnet	ASTM A216 Gr. WCB
10	O-Ring Packing Seat	Viton
11	Stem	ASTM A276 Gr. 410
12	O-Ring	Viton
13	Gate	ASTM A515 Gr. 70 + ENP or ASTM A105N+ ENP
14	Body	ASTM A216 Gr. WCB
15	Sealant Fitting	Cs + Zn
16	Seat	ASTM A105N + ENP
17	Drain Plug	Cs + Zn
18	Seat insert	RPTFE or Nylon
19	Yoke	ASTM A216 Gr. WCB
20	Vent	Cs + Zn
21	Spring	Inconel X-750



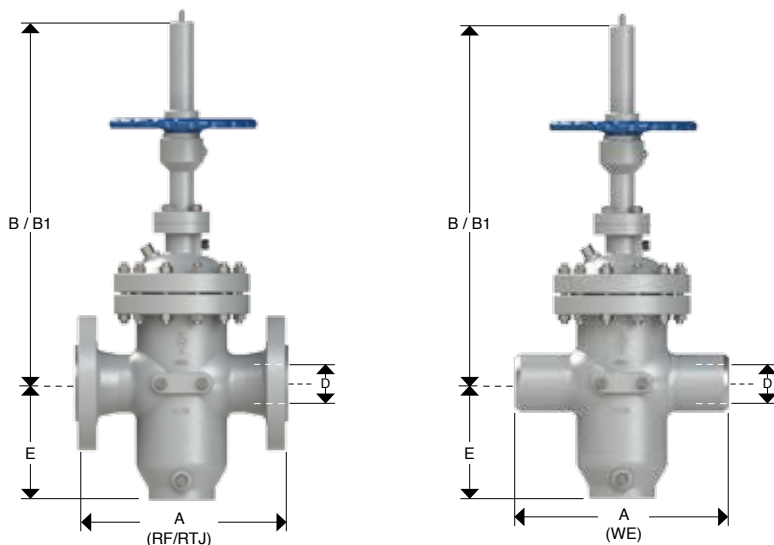
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FIGURE No.	OPERATION	TYPE ON ENDS
5912	Handwheel	RF
5913	Handwheel	RTJ
5914	Handwheel	WE



### Dimensions

NOM SIZE	in	2"	3"	4"	6"
OPERATION		HW	HW	HW	HW
D	in	1.93	2.91	3.94	5.67
	mm	49	74	100	144
A / RF	in	14.49	18.50	21.50	27.76
	mm	368	470	546	705
A / RTJ	in	14.61	18.62	21.61	27.99
	mm	371	473	549	711
A / WE	in	14.49	18.50	21.50	27.76
	mm	368	470	546	705
B	in	23.07	25.47	30.71	40.94
	mm	586	647	780	1040
B1	in	25.83	29.45	35.83	47.95
	mm	656	748	910	1218
E	in	6.69	7.68	8.66	12.52
	mm	170	195	220	318
Weight RF	lbs	143.26	639.16	1024.86	2181.96
	kg	65	290	465	990
Weight WE	lbs	124.64	556.07	891.63	1898.31
	kg	56.55	252.3	404.55	861.3

B = Close Position B1 = Open Position

# SLAB GATE VALVES, CLASS 1500 (GEAR OPERATED)

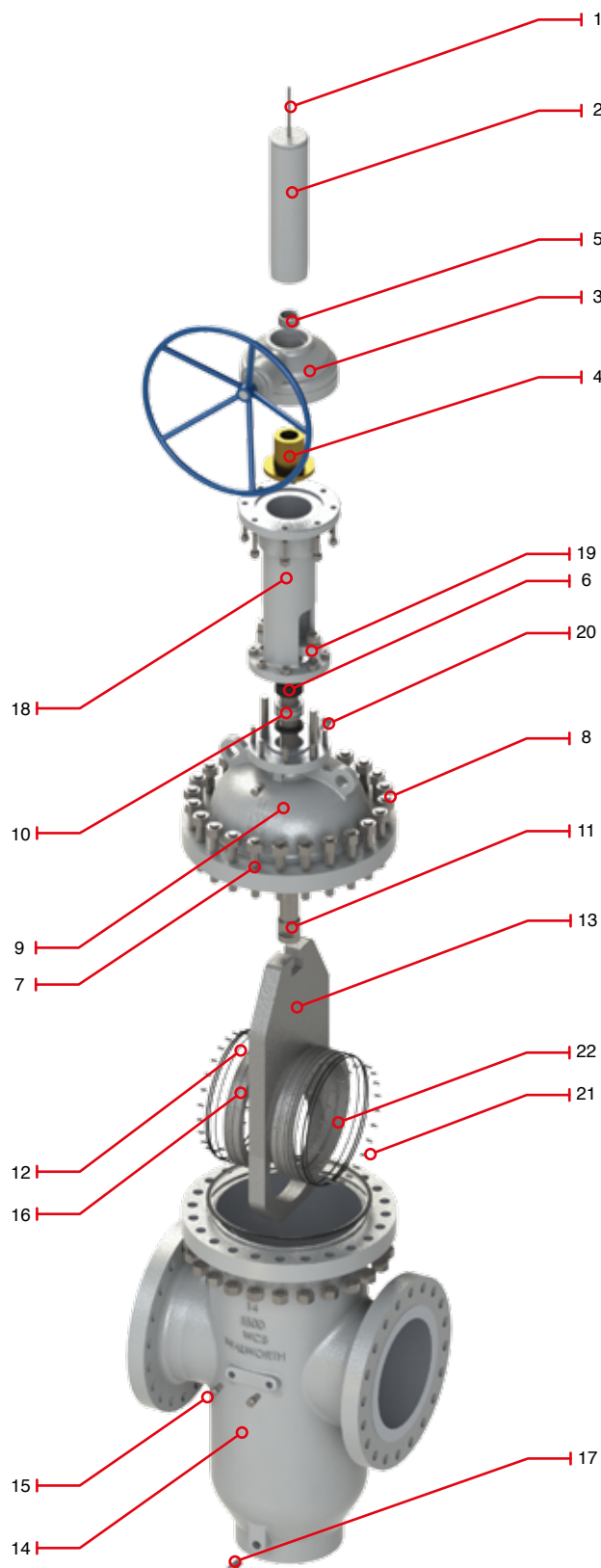
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- WE dimensions as per ASME B31.4 and/or ASME B31.8 and tapered as per ASME B16.25 figure 1
- Full opening
- Size from 6" to 24" Gear operated as standard

FIGURE No.	OPERATION	TYPE ON ENDS
5922	Gear Operator	RF
5923	Gear Operator	RTJ
5924	Gear Operator	WE

## Regular Bill of Materials

No.	Description	Standard Material
1	Indicator Rod	SS 410
2	Stem Protector	CS
3	Handwheel	A197
4	Stem Nut	ASTM A439 D2
5	Thrust Bearing	AISI 1035
6	Stem Packing	Graphite
7	Bolt	ASTM A193 Gr. B7M
8	Nut	ASTM A194 Gr. 2HM
9	Bonnet	ASTM A216 Gr. WCB
10	O-Ring Packing Seat	Viton
11	Stem	ASTM A276 Gr. 410
12	O-Ring	Viton
13	Gate	ASTM A515 Gr.70+ TCC or ASTM A105N+ TCC
14	Body	ASTM A216 Gr. WCB
15	Sealant Fitting	Cs + Zn
16	Seat	ASTM A105N + TCC
17	Drain Plug	Cs + Zn
18	Yoke	ASTM A216 Gr. WCB
19	Gland Flange	CS
20	Vent	Cs + Zn
21	Springs	Inconel X-750
22	Seat Insert	RPTFE or Nylon



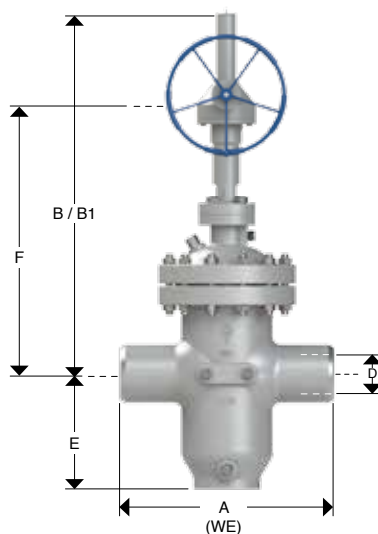
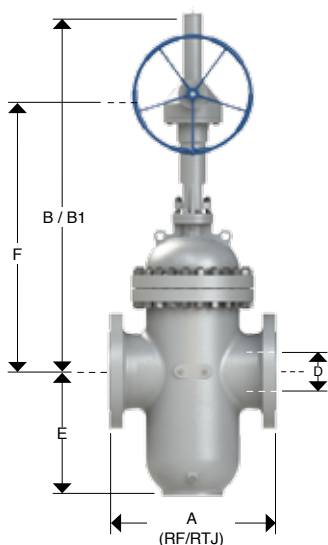
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FIGURE No.	OPERATION	TYPE ON ENDS
5922	Gear Operator	RF
5923	Gear Operator	RTJ
5924	Gear Operator	WE



### Dimensions

NOM SIZE	in	8"	10"	12"	14"	16"	18"	20"	24"
OPERATION		GO	GO	GO	GO	GO	GO	GO	GO
D	mm	7.56	9.41	11.30	12.40	14.17	15.98	17.87	21.50
	in	.192	.239	.287	.315	.360	.406	.454	.546
A / RF	mm	32.76	39.02	44.49	49.49	54.49	60.51	65.51	76.50
	in	.832	.991	1.130	1.257	1.384	1.537	1.664	1.943
A / RTJ	mm	33.11	39.37	45.12	50.24	55.39	61.38	66.38	77.64
	in	.841	1.000	1.146	1.276	1.407	1.559	1.686	1.972
A / WE	mm	32.76	39.02	44.49	49.49	54.49	60.51	65.51	76.50
	in	.832	.991	1.130	1.257	1.384	1.537	1.664	1.943
B	mm	50.98	62.99	70.87	74.49	85.24	93.70	100.79	114.57
	in	1.295	1.600	1.800	1.892	2.165	2.380	2.560	2.910
B1	mm	60.00	73.98	83.82	88.62	101.26	111.65	119.92	138.23
	in	1.524	1.879	2.129	2.251	2.572	2.836	3.046	3.511
E	mm	16.22	20.16	23.70	26.06	29.13	32.52	36.30	42.72
	in	.412	.512	.602	.662	.740	.826	.922	1.085
F	mm	38.46	48.15	53.58	55.75	64.65	70.98	76.85	85.94
	in	.977	1.223	1.361	1.416	1.642	1.803	1.952	2.183
Weight RF	lbs	3658.64	5631.22	10056.85	14804.27	22117.14	32326.07	40322.18	56620.76
	kg	1660	2555	4563	6717	10035	14667	18295	25690
Weight WE	lbs	3183.02	4899.16	8749.46	12879.71	19241.91	28123.68	35080.30	49260.06
	kg	1444.2	2222.85	3969.81	5843.79	8730.45	12760.29	15916.65	22350.3

B = Close Position B1 = Open Position