

# C-10 CANAL GATE

This gate is designed for use on canal and pipeline systems which operate at low "heads" and where a moderately priced gate is desired. Typical installations include: farm turnouts, control of industrial wastes, drainage and for tide control.

Construction is of grey iron with an all-bolted steel frame with  $\frac{1}{4}$ " minimum thickness. The standard stem is of a special leaded steel which resists corrosion. The stem is operated at the structural frame top by a heavy cast-bronze lift nut and a cast iron wheel.

Adjustable cast iron wedge blocks, held securely in place by two machine bolts, assure a dependable seating closure with a practical degree of water tightness. The cast iron seats are machined or ground. A solid rim "easy-grip" handwheel is standard.

Optional materials include: bronze seats; stainless steel structural frame and bolts; stainless steel or brass stems; and special epoxy, coal tar or ASTM galvanized coatings.

When desired, design variation in stem diameter, pitch and thread rotation are available to match existing equipment. Extended stems, special lifts, oil seals, stem guides and limit nuts are a few of the optional items available for use with these gates.

Various sizes and options are available.

Special materials available include: "Ni-Resist" iron castings, stainless steel structural frame and assembly bolts; total galvanizing per ASTM A-123; coal tar, and epoxy coatings.

Recommended Maximum Seating Heads	
6" - 24"	23 foot head
30" - 36"	11 foot head
42" - 48"	9 foot head
54" - 72"	6 foot head
Recommended Maximum Unseating Head - 0	

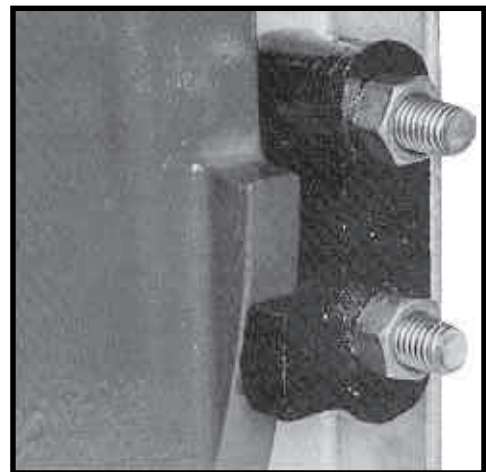
## Frame Types for Various Installation Requirements

- F ..... Flatback for headwall mounting
- SB ..... Spigotback for annular or recor spiral corrugated pipe.
- CIP ..... For solvent cement mounting over plastic pipe
- C ..... With galvanized steel tapered setting collar for concrete or asbestos cement pipe.
- SA ..... Spigotback for annular corrugated pipe.
- TYPE 4 .... For mounting in plastic pipe utilizing special two part epoxy.



Bronze lift nut furnished as standard on all Waterman Canal Gates.

Features  $\frac{1}{4}$ " minimum thickness. Compare to competitor's gates.

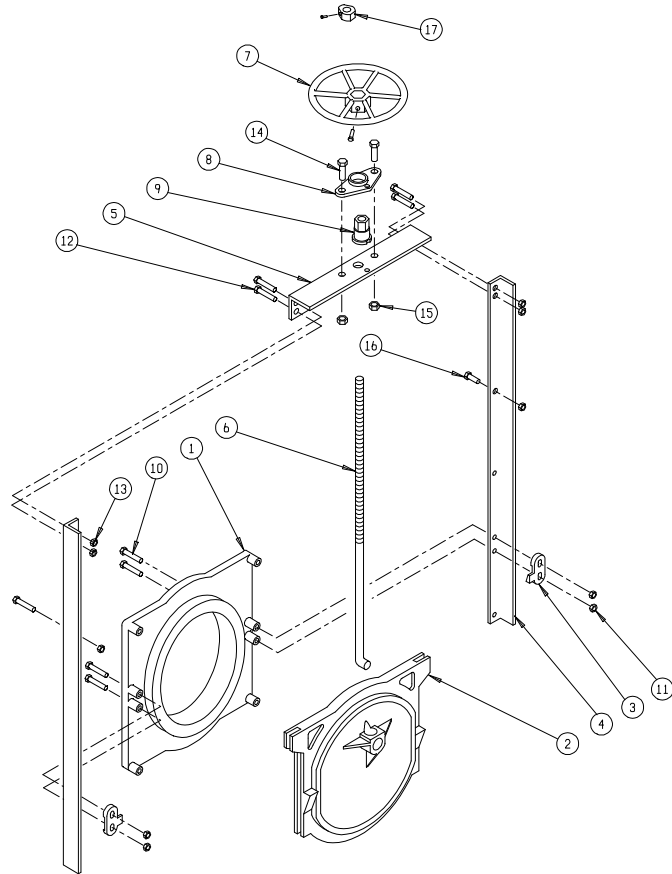


Waterman Model C-10 wedging system offers two point adjustment and larger wedging surfaces for a more positive contact.

## C-10 CANAL GATE PARTS

PARTS LIST		
No.	Name	Qty.
1	Frame	1
2	Cover	1
3	Wedge (R&L)	2
4	Guide Rail (R&L)	2
5	Headrail	1
6	Stem	1
7	Handwheel	1
8	Thrust Collar	1
9	Lift Nut	1
10	Wedge Bolt	4
11	Wedge Nut	4
12	Frame Bolt	4
13	Frame Nut	4
14	Collar Bolt	2
15	Collar Nut	2
16	Stop Bolt & Nut	1
17	Limit Nut (optional) *	1

\* With set screw



## CL-10 CANAL GATE

Waterman CL-10 Canal Gates are identical to our model C-10 Gates with the exception of the cast iron cover (slide) which is of a flat plate type construction with ribs reinforcing its face, to withstand the maximum heads as noted for our C-10 gates. This gate cover also features a square bottom design, which allows a more open "clog-free" flow at points of initial opening. The seat being only slightly raised above the cover plate surface helps prevent trash from collecting behind the cover which can cause difficulty in operation.

Available with threaded thrust nut for true NRS application. All parts are interchangeable with our Standard C-10 gate. Available in a variety of sizes.

CL-10

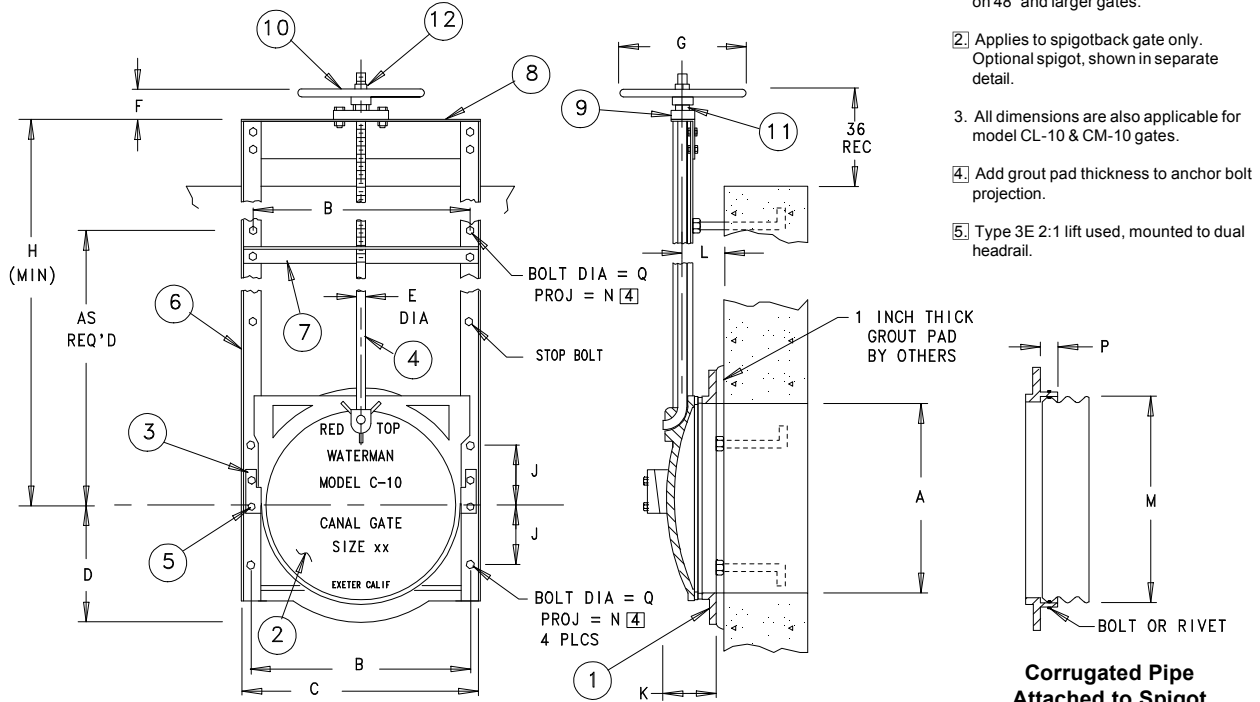


Shown with  
optional  
threaded thrust nut  
for true non-rising  
stem operation



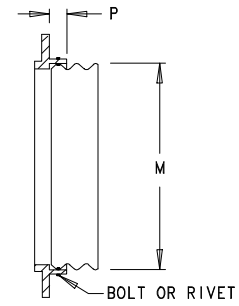
Flat Plate Type,  
Square Bottom

# C-10 CANAL GATE



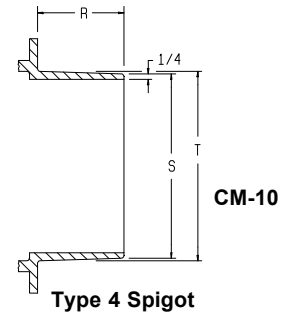
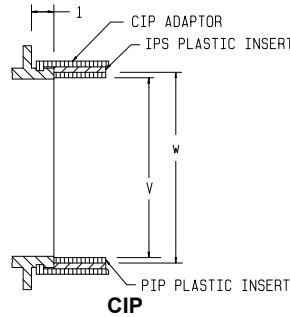
**NOTES**

1. TYPE 2 lubricated ball bearing lift used on 48" and larger gates.
2. Applies to spigotback gate only. Optional spigot, shown in separate detail.
3. All dimensions are also applicable for model CL-10 & CM-10 gates.
4. Add grout pad thickness to anchor bolt projection.
5. Type 3E 2:1 lift used, mounted to dual headrail.



**Corrugated Pipe Attached to Spigot Back Frame**

PARTS LIST		
No.	Name	Qty.
1	Frame	1
2	Cover	1
3	Wedge (Right & Left)	1 ea.
4	Stem	1
5	Wedge Bolts	4
6	Guide Rail	2
7	Stem Support	A/R
8	Head Rail	1
9	Lift Collar	1
10	Handwheel	1
11	Lift Nut	1
12	Limit Nut	1



A	B	C	D	E	F	G	H	J	K	L	M [2]	N	P [2]	Q	R	S	T	V	W
6	8	9 <sup>7</sup> / <sub>8</sub>	4	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	24	3	3 <sup>1</sup> / <sub>2</sub>	2 <sup>5</sup> / <sub>8</sub>	7	3 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	-	-	-	6.160	6.645
8	10	12	4 <sup>7</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	24	3	3 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	9	3 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	4	7 <sup>9</sup> / <sub>16</sub>	8	8.180	8.645
10	12	13 <sup>3</sup> / <sub>8</sub>	6	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	24	3 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	11	3 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	3 <sup>7</sup> / <sub>8</sub>	9 <sup>7</sup> / <sub>8</sub>	10	10.220	10.770
12	14	15 <sup>5</sup> / <sub>8</sub>	7	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	24	4	3 <sup>1</sup> / <sub>2</sub>	3	13	4	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	4	11 <sup>1</sup> / <sub>8</sub>	12	12.270	12.780
14	16	17 <sup>5</sup> / <sub>8</sub>	8	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	27	4 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	15	4	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	-	-	-	-	-
15	17	18 <sup>5</sup> / <sub>8</sub>	8 <sup>5</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	30	5	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	16	4	2 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	4	14 <sup>5</sup> / <sub>8</sub>	15	-	-
16	18 <sup>3</sup> / <sub>4</sub>	20 <sup>5</sup> / <sub>8</sub>	9 <sup>5</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>8</sub>	10	32	5 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	17	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>8</sub>	-	-	-	-	-
18	21	22 <sup>5</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>2</sub>	1	3 <sup>3</sup> / <sub>8</sub>	12	34	6	4 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>4</sub>	19	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>8</sub>	4	17 <sup>13</sup> / <sub>16</sub>	18	-	-
20	23 <sup>1</sup> / <sub>4</sub>	25 <sup>5</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>4</sub>	1	3 <sup>3</sup> / <sub>8</sub>	12	38	7	4 <sup>3</sup> / <sub>4</sub>	4	21	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>8</sub>	-	-	-	-	-
21	24	25 <sup>5</sup> / <sub>8</sub>	12 <sup>3</sup> / <sub>16</sub>	1	3 <sup>3</sup> / <sub>8</sub>	12	40	7	4 <sup>3</sup> / <sub>4</sub>	4	22	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>8</sub>	-	-	-	-	-
24	27 <sup>1</sup> / <sub>4</sub>	29 <sup>5</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>8</sub>	1	3 <sup>3</sup> / <sub>8</sub>	12	44	8	5 <sup>3</sup> / <sub>4</sub>	4 <sup>7</sup> / <sub>8</sub>	25	4 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>8</sub>	-	-	-	-	-
30	33 <sup>3</sup> / <sub>4</sub>	36 <sup>5</sup> / <sub>8</sub>	17 <sup>3</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>8</sub>	4	15	54	10	6	4 <sup>1</sup> / <sub>2</sub>	31	6	2 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	-	-	-	-	-
36	39 <sup>3</sup> / <sub>4</sub>	42 <sup>5</sup> / <sub>8</sub>	20 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>8</sub>	4	15	62	12	6 <sup>1</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>8</sub>	37	6	2 <sup>1</sup> / <sub>4</sub>	3 <sup>3</sup> / <sub>4</sub>	-	-	-	-	-
42	45 <sup>3</sup> / <sub>4</sub>	48 <sup>5</sup> / <sub>8</sub>	23 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	5	18	84	14	7	6	43	6	2 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	-	-	-	-	-
48	51 <sup>3</sup> / <sub>4</sub>	54 <sup>5</sup> / <sub>8</sub>	26 <sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>2</sub>	6	24 [1]	90	16	7 <sup>7</sup> / <sub>8</sub>	6 <sup>5</sup> / <sub>8</sub>	49 <sup>5</sup> / <sub>8</sub>	6	2 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	-	-	-	-	-
54	58 <sup>1</sup> / <sub>2</sub>	61 <sup>1</sup> / <sub>2</sub>	30	2	6	30 [1]	100	18	7 <sup>7</sup> / <sub>8</sub>	6 <sup>1</sup> / <sub>2</sub>	55 <sup>5</sup> / <sub>8</sub>	7	3	1	-	-	-	-	-
60	65	68	34	2	6	30 [1]	102	20	8 <sup>5</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	61 <sup>5</sup> / <sub>8</sub>	8	3 <sup>3</sup> / <sub>4</sub>	1	-	-	-	-	-
72	77 <sup>1</sup> / <sub>2</sub>	80 <sup>1</sup> / <sub>4</sub>	41	2	13	5	121	25 <sup>1</sup> / <sub>2</sub>	10 <sup>5</sup> / <sub>8</sub>	8 <sup>3</sup> / <sub>4</sub>	73 <sup>3</sup> / <sub>4</sub>	8	3 <sup>3</sup> / <sub>8</sub>	1	-	-	-	-	-

GATE DIMENSIONS IN INCHES