

# ALFALFA VALVES

- **Extra Heavy Duty**
- **Hydrant Compatible**

Waterman RED TOP Alfalfa Valves and Waterman SUNSHINE Alfalfa Valves are designed particularly for use with the Waterman Universal Hydrant, when portable surface pipe is to be used, or when an extra heavy duty valve is desired. A fully machined outer rim or seat ring is provided to fit and make a watertight seal with our hydrant.

The impact of a large volume of water against the valve cover and screw is sometimes severe. To withstand this, the bronze screw is made especially heavy and is secured to the rugged cast iron cover with a brass nut and washer instead of with a small cotter pin as is commonly used on many similar valves. Continuous ring cover packing, designed with a hollow center for added resilience, is used to make an easy-sealing valve. A solid bronze nut is standard. A brass washer and O-ring combine to make a dependable stem seal.

- **Covers**

Select either the RED TOP concave cover or the SUNSHINE convex (dome) type cover.

- **Screws**

Select either high strength NATIONAL STANDARD THREAD (vee) or rugged MODIFIED ACME THREAD (square) on these valves. Both threads require only three turns per inch of opening.

- **Arches**

Select either a frame with a SOLID ARCH, cast in place, or our popular REMOVABLE ARCH, which is easily removed for placement of suction hoses, repairs, etc. A quick eccentric latch locks the arch in place without troublesome cotter keys, pins or bolts.

- **Frames**

Select a frame type from page 13.

Type 1 - Web Frame

Type 2 - Quick Setting

Type 3 - For Steel Pipe

Type 4 - For Plastic Pipe

Type CIP - "Easy Mount" for Plastic Pipe

For use with the Waterman Universal Hydrant

## RED TOP



Red Top Alfalfa Valve with Type 1 Frame and Removable Arch

## SUNSHINE



Sunshine Alfalfa Valve with Type 2 (Quick Setting) Frame and Removable Arch

**Maximum Operating Heads:**

6"-12", 25 feet; 14", 20 feet; 18"-20", 15 feet; 24", 10 feet; 30"-36", 10 feet

**Maximum Static Heads:**

6"-12", 50 feet; 14", 35 feet; 18"-20", 30 feet; 24", 20 feet; 30"-36", 15 feet.

## AIR RELIEF AND DRAIN VALVE

for installing underneath overflow and alfalfa covers



Provides drainage for standing water in concave style covers and acts as a simple air relief for evacuation of air trapped under the valve cover.

# ALFALFA VALVE FRAME TYPES

## FOR PIPE MADE OF CONCRETE, STEEL AND PLASTIC

Most frame types are available with either RED TOP or SUNSHINE covers. Many are available with either a cast-in SOLID ARCH or our popular eccentric lock REMOVABLE ARCH. Threads may be specified as NATIONAL STANDARD (vee) or MODIFIED ACME (square). Please specify all details when ordering.

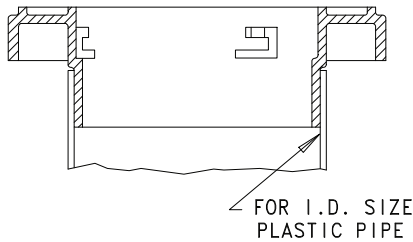
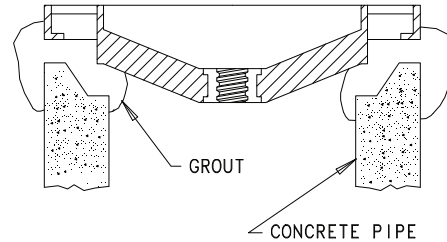
## INSTALLATION SUGGESTIONS

### TYPE 1 - WEB

Place grout on concrete riser, set valve. Add additional grout and trowel with laying glove to fill voids between web. After grout has dried, check and regrout any voids.

**Caution:** Seat rings must be free of grout for at least 3/8" below surface. Valve should not be banded on outside when hook type hydrant will be used.

**Note:** This valve setting may be strengthened for use with higher heads or severe surges by tying reinforcing wire into web before grouting.



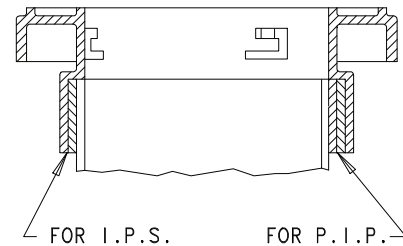
### TYPE 4 - FOR I.D. LOWHEAD PLASTIC PIPE

**Method #1** - Press valve into inside of riser pipe and secure with two draw bands. Heat pipe if needed to allow valve spigot to enter pipe I.D.

**Method #2** - Using No. 1050 I.P.S. 2 part epoxy or equal, apply cement to outside surface of valve skirt and inside surface of riser. Press valve firmly into riser rotating 1/4 turn.

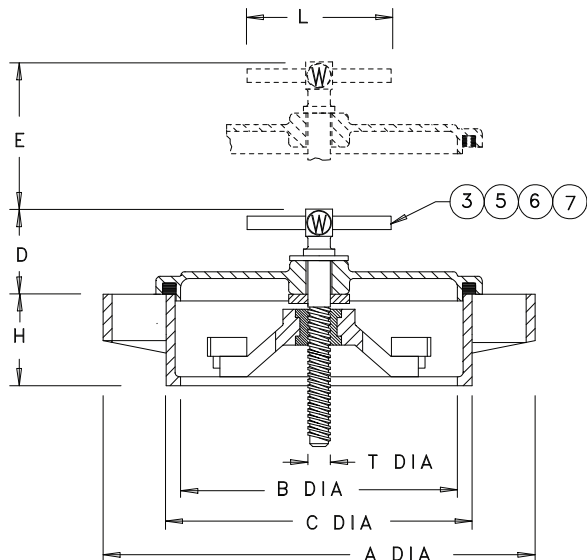
### TYPE CIP - "EASY MOUNT" FOR PLASTIC PIPE (CIP-PIP FOR PLASTIC IRRIGATION PIPE SIZE PIPE- CIP-IPS FOR IRON PIPE SIZE PLASTIC PIPE)

Prime inside of plastic valve skirt and outside of pipe riser. Apply PVC cement to same surfaces and immediately press valve firmly onto riser, rotating a 1/4 turn as you set valve.

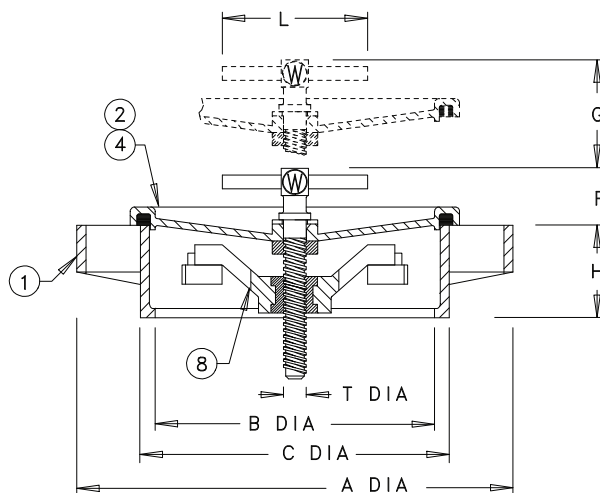


(1) A uniform outside skirt length makes possible the use of our Universal Hook Type Hydrant on these valves without hook adjustments when moving the hydrant from valves of one frame style to another.

# RED TOP & SUNSHINE ALFALFA VALVE DIMENSIONS



SUNSHINE ALFALFA VALVE  
TYPE 1 FRAME



RED TOP ALFALFA VALVE  
TYPE 1 FRAME

### NOTES

1. SEE FACING PAGE FOR TYPE 2, 3, 4, & 5 FRAME DIMENSIONS.
2. AVAILABLE WITH RED TOP COVER ONLY.
3. (FACING PAGE) VALVE AVAILABLE WITH SOLID ARCH ONLY.
4. (FACING PAGE) SUITABLE FOR USE WITH 50 FT., & 100 FT. PIP PLASTIC PIPE.
5. 8" THRU 24" DIA. VALVES ARE 3 T.P.I., 30" & 36" ARE 4 T.P.I.

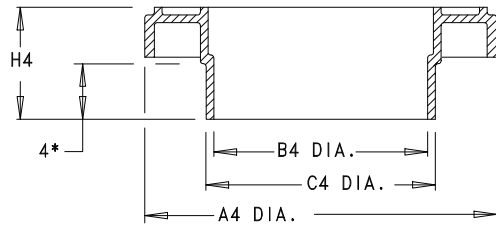
### PARTS LIST

No.	Name	Qty.
1	FRAME	1
2	COVER	1
3	SCREW	1
4	PACKING	1
5	NUT	1
6	WASHER	1
7	O-RING	1
8	ARCH	1

VALVE DIMENSIONS IN INCHES (NOMINAL)														
VALVE SIZE	A	B	C	D	E	F	G	H	L	T	TURNS TO FULLY OPEN		MAX. RECOMMENDED HEAD (FT.) STATIC OPERATING	
											SUNSHINE	RED TOP	SUNSHINE	RED TOP
8	12	7 <sup>13</sup> / <sub>16</sub>	8 <sup>5</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	2	6	7 <sup>7</sup> / <sub>8</sub>	7	8	50	25
10	13 <sup>3</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>4</sub>	10 <sup>5</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3 <sup>5</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>8</sub>	1 <sup>15</sup> / <sub>16</sub>	7	1	11	10	50	25
12	16 <sup>1</sup> / <sub>16</sub>	11 <sup>1</sup> / <sub>4</sub>	12 <sup>5</sup> / <sub>16</sub>	2 <sup>7</sup> / <sub>8</sub>	3	1 <sup>5</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>16</sub>	7	1 <sup>1</sup> / <sub>8</sub>	9	9	50	25
14	18 <sup>13</sup> / <sub>16</sub>	13 <sup>5</sup> / <sub>16</sub>	14 <sup>3</sup> / <sub>8</sub>	3 <sup>7</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>8</sub>	1 <sup>5</sup> / <sub>16</sub>	4 <sup>3</sup> / <sub>4</sub>	2 <sup>13</sup> / <sub>16</sub>	8	1 <sup>1</sup> / <sub>4</sub>	15	14	35	20
16	21 <sup>1</sup> / <sub>16</sub>	15 <sup>3</sup> / <sub>4</sub>	16 <sup>7</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>16</sub>	3 <sup>5</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>	8	1 <sup>1</sup> / <sub>4</sub>	10	11	30	20
18	23 <sup>1</sup> / <sub>4</sub>	17 <sup>7</sup> / <sub>8</sub>	18 <sup>7</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>4</sub>	5 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	8	1 <sup>1</sup> / <sub>4</sub>	16	16	30	15
20	25 <sup>3</sup> / <sub>8</sub>	19 <sup>3</sup> / <sub>8</sub>	20 <sup>13</sup> / <sub>16</sub>	3 <sup>11</sup> / <sub>16</sub>	5 <sup>5</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>4</sub>	8	1 <sup>1</sup> / <sub>4</sub>	17	19	30	15
24	29 <sup>3</sup> / <sub>8</sub>	23 <sup>3</sup> / <sub>4</sub>	24 <sup>3</sup> / <sub>4</sub>			7 <sup>7</sup> / <sub>8</sub>	8 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub>	8	1 <sup>1</sup> / <sub>4</sub>	-	26	20	10
30	38	29	30			1	6	4	10	1 <sup>1</sup> / <sub>2</sub>	-	18	15	10
36	44	35	36			1 <sup>1</sup> / <sub>8</sub>	4	4	10	2	-	12	15	10

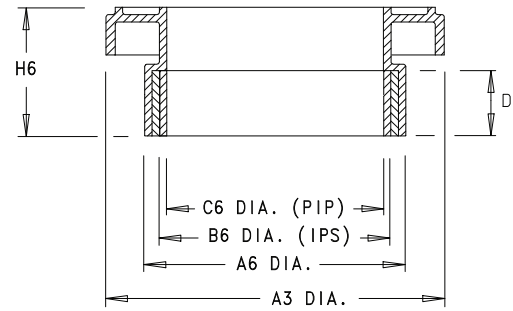
ALL DIMENSIONS SUBJECT TO CHANGE

# RED TOP & SUNSHINE ALFALFA VALVE DIMENSIONS



**TYPE 4 FRAME**

\* 6 inch = 3 1/4"  
 \* 8 inch = 3 1/2"



**C.I.P. FRAME**

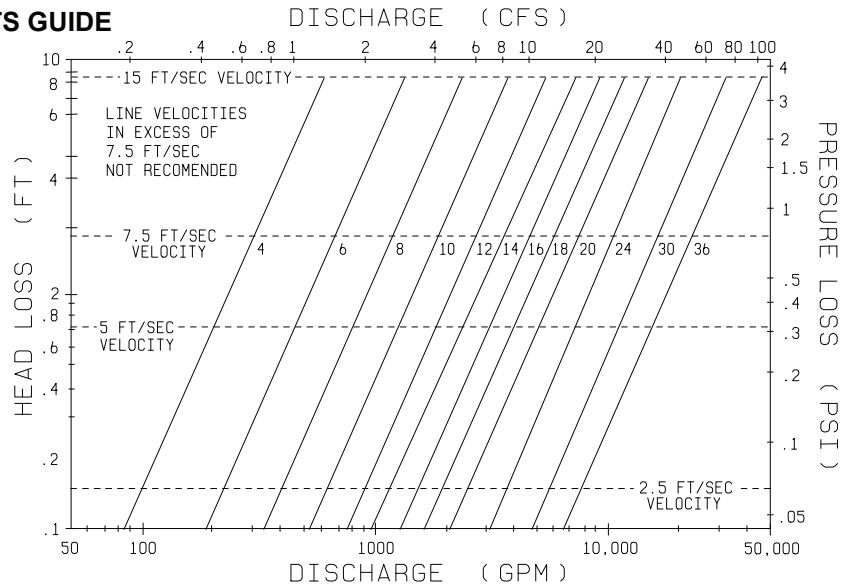
VALVE DIMENSIONS IN INCHES

VALVE SIZE	TYPE 4 FRAME <sup>4</sup> I.D. PLASTIC PIPE				C.I.P. FRAME IPS & PIP PLASTIC PIPE				
	A4	B4	C4	H4	A6	B6	C6	H6	D
6 <sup>3</sup>	10	5 1/2	5 15/16	4 1/2	7.38	6.62	6.16	5 5/8	2.50
8	12 3/8	7 3/8	7 15/16	5 3/8	9.63	8.64	8.18	6 1/4	3.00
8 X 10	14 1/16	7 3/8	7 15/16	5 3/16	-	-	-	-	-
8 X 12 <sup>3</sup>	16 1/2	7 3/8	7 15/16	5 3/8	-	-	-	-	-
10	14 1/8	9 3/8	9 7/8	5 3/4	11.50	10.77	10.22	6 3/16	3.00
10 X 12	16 3/8	9 3/8	9 7/8	5 7/16	-	-	-	-	-
12	16 1/2	11 3/8	11 7/8	5 15/16	13.52	12.78	12.27	6 3/16	3.00
14	-	-	-	-	-	-	-	-	-
15 X 14	19 3/16	14 1/4	14 3/4	15 13/16	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-
18	23 1/4	17	17 3/4	6 3/8	-	-	-	-	-
20	25 3/8	19 1/8	19 3/16	7 1/16	-	-	-	-	-

ALL DIMENSIONS SUBJECT TO CHANGE

**PERFORMANCE CHART & PARTS GUIDE**

**Flow through various size alfalfa valves, with corresponding pressure loss at rate of discharge**



RED TOP ALFALFA VALVE PARTS GUIDE *											
SIZE	COVER	SCREW	REMOVABLE ARCH TYPE-1 (CONCRETE)	REMOVABLE ARCH TYPE-3 (O.D. STEEL)	REMOVABLE ARCH TYPE-4 (PIP)	REMOVABLE ARCH CIP (IPS-PIP)	ARCH	SOLID ARCH TYPE-1 (CONCRETE)	SOLID ARCH TYPE-4 (PIP)	SOLID ARCH CIP (IPS-PIP)	
8"	W151 8A	7/8" 8A	W153-1 8A	W948 8A	W889 8A	W1895 RA-CIP	W152 8A	W154 8SA			
10"	W155 10A	1" 10A	W156 10A	W890-3 10A	W891 10A	W1890 RA-CIP	W158 10A	W157 10SA			
12"	W159 12A	1 1/8" 12A	W160 12A	W1105-3 12A	W941 12A	W1891 RA-CIP	W162 12A	W161 12SA			
14"	W163 14A	1 1/4" 14A	W164 14A	W393-3 14			W166 14A	W165 14SA			
16"	W128 16A	1 1/4" 16A	W167 16A				W168 16A				
18"	W130 18A	1 1/2" 20A	W169 18A		W169-3 18A		W170 18A				
20"	W132 20A	1 1/2" 20A	W171 20A		W171-2 20A		W172 20A				
24"	W279 24A	1 1/2" 20SS	W280 24A				W278 24A				
30"	W663 30A	1 1/2" 30A	W662 30A				W664 30A				
36"	W1072 36A	2" 36A	W1073 36A				W107 36A				

\* Numbers beginning with "W" (example: "W130", etc.) are casting numbers which can be located on each cast part. Numbers which do not begin with "W" are part designations also found on most castings (example: "16A", etc.)

SUNSHINE ALFALFA VALVE PARTS GUIDE *											
SIZE	COVER	SCREW	REMOVABLE ARCH TYPE-1 (CONCRETE)	REMOVABLE ARCH TYPE-4 (PIP)	REMOVABLE ARCH CIP (IPS-PIP)	ARCH	SOLID ARCH TYPE-2 (CONCRETE)	SOLID ARCH TYPE-4 (PIP)	SOLID ARCH CIP (IPS-PIP)		
6"	W646 6SSA	7/8" 8A			W1895 RA-CIP		W647 6SA	W888 6SA	W1871 SA-CIP		
8"	W146-1 8SSA	7/8" 8A	W153-1 8A	W889 8A	W1890 RA-CIP	W1355 8SSA	W154 8SA	W1155 8SA	W2011 SA-CIP		
10"	W141 10SSA	1" 10A	W156 10A	W891 10A	W1891 RA-CIP	W1585 10SSA	W2077 10SA	W1129 10SA	W1873 SA-CIP		
12"	W143 12SSA	1 1/8" 12A	W160 12A	W941 12A		W1625 12SSA	W652 12SA	W1121 12SA	W2012 SA-CIP		
14"	W148 14SSA	1 1/8" 14SS	W164 14A			W277 14SAA	14SA				
16"	W145 16SSA	1 1/4" 20A	W167 16A			W168 16A	16SA				
18"	W147 18SSA	1 1/4" 20SS				W170 18A					
20"	W1366 20SSA	1 1/4" 20SS				W172 20A					
8" X 10"	W141 10SSA	1" 10A		W1071 8"X10"A		W1683 8"X10"SSA		W1166 8"X10"SA			
10" X 12"	W143 12SSA	1 1/8" 12A		W1055 10"X12"A		W1245 10"X12"SSA		W1147 10"X12"SA			
15" X 14"	W148 14SSA	1 1/4" 16A		W1194 15"X14"A	W166 14A						

\* Numbers beginning with "W" (example: "W130", etc.) are casting numbers which can be located on each cast part. Numbers which do not begin with "W" are part designations also found on most castings (example: "16A", etc.)