

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

SUNSHINE



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

RED TOP



Red Top Alfalfa Valve with Type 1 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.

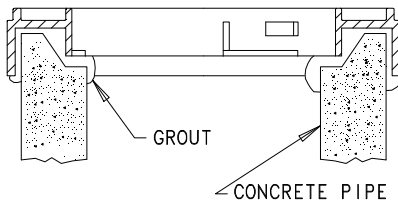
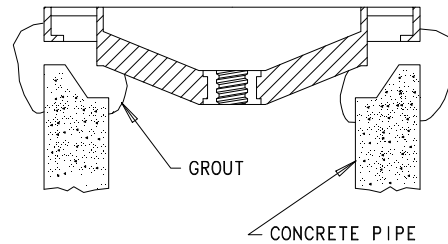
INSTALLATION SUGGESTIONS

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.

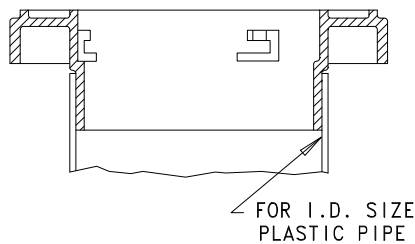
Note: This valve setting may be strengthened for use with higher heads or severe surges by tying reinforcing wire into web before grouting.



TYPE 2 - QUICK SETTING

Invert frame and fill cavity with heavy grout and/or place grout on top of riser pipe. Quickly turn frame over onto risers, rotating slightly to assure firm contact. Trowel inside edge. Clean seat and threads.

Note: The grouting cavity is large enough to accommodate most reinforced pipe as well as standard irrigation sizes.



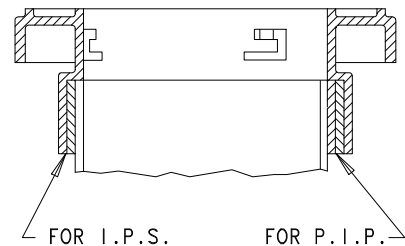
TYPE 4 - FOR I.D. LOWHEAD PLASTIC PIPE

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.

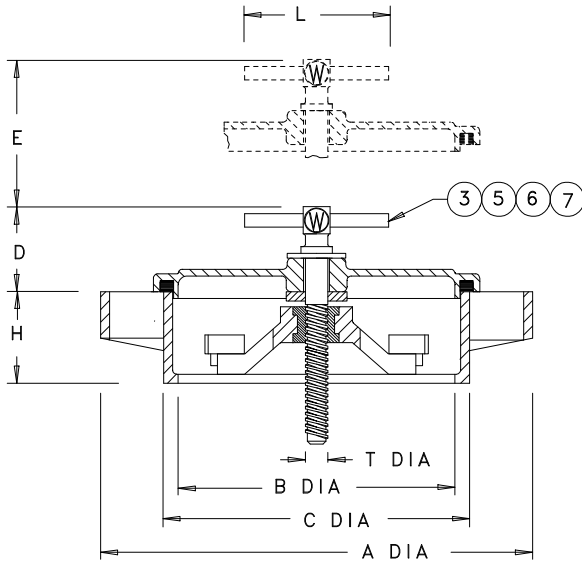
TYPE CIP - "EASY MOUNT" FOR PLASTIC PIPE (CIP-PIP FOR PLASTIC IRRIGATION PIPE SIZE PIPE- CIP-IPS FOR IRON PIPE SIZE PLASTIC PIPE)

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.

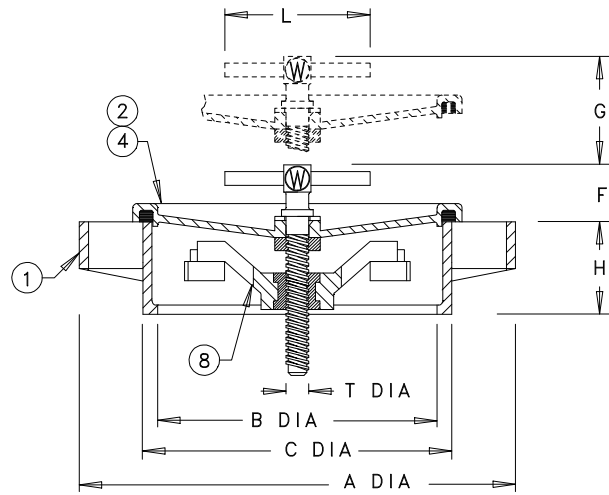


(1) A uniform outside skirt length makes possible the use of our Universal Hook Type Hydrant on these valves without hook adjustments when moving the hydrant from valves of one frame style to another.

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

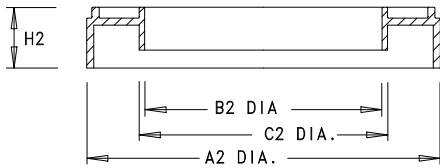
| No. | Name | Qty. |
|-----|---------|------|
| 1 | FRAME | 1 |
| 2 | COVER | 1 |
| 3 | SCREW | 1 |
| 4 | PACKING | 1 |
| 5 | NUT | 1 |
| 6 | WASHER | 1 |
| 7 | O-RING | 1 |
| 8 | ARCH | 1 |

VALVE DIMENSIONS IN INCHES (NOMINAL)

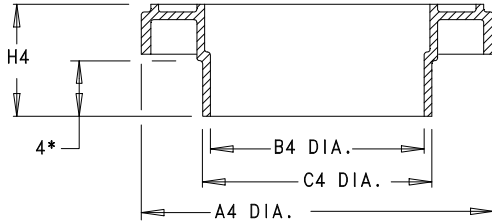
| VALVE SIZE | A | B | C | D | E | F | G | H | L | T | TURNS TO FULLY OPEN | | MAX. RECOMMENDED HEAD (FT.) STATIC OPERATING | |
|------------|----------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|--------------------------------|------------------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

ALL DIMENSIONS SUBJECT TO CHANGE

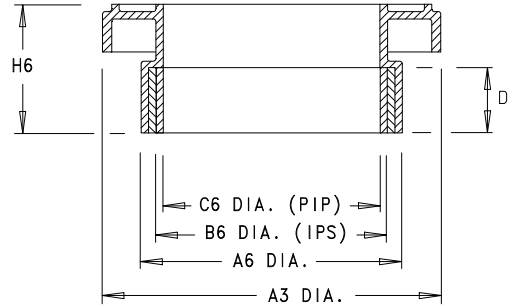
RED TOP & SUNSHINE ALFALFA VALVE DIMENSIONS



TYPE 2 FRAME



TYPE 4 FRAME



C.I.P. FRAME

* 6 inch = 3¼"
* 8 inch = 3½"

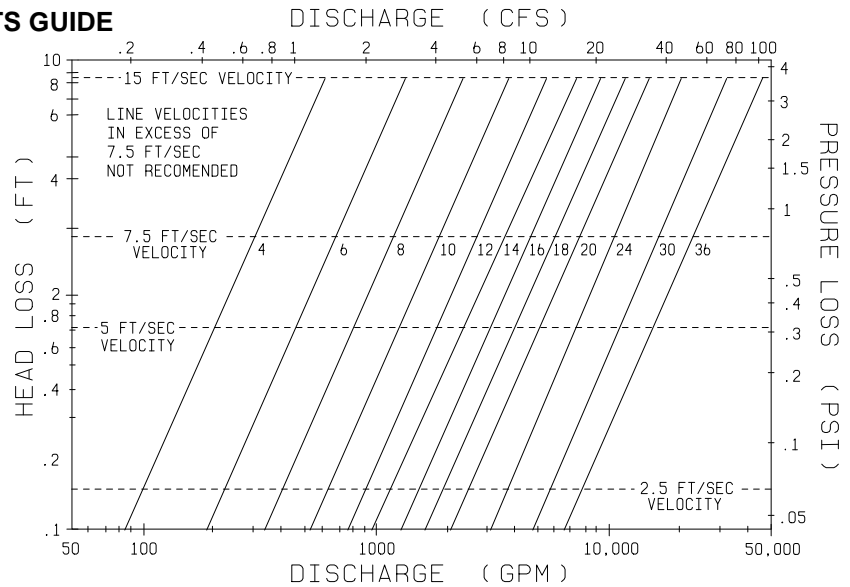
VALVE DIMENSIONS IN INCHES

| VALVE SIZE | TYPE 2 FRAME QUICK SETTING | | | | TYPE 3 FRAME O.D. STEEL PIPE | | | | TYPE 4 FRAME I.D. PLASTIC PIPE ⁴ | | | | C.I.P. FRAME IPS & PIP PLASTIC PIPE | | | | |
|---------------------|--------------------------------|----|---------------------------------|--------------------------------|---------------------------------|-----------------------------------|---------------------------------|--------------------------------|---|--------------------------------|---------------------------------|----------------------------------|-------------------------------------|-------|-------|--------------------------------|------|
| | A2 | B2 | C2 | H2 | A3 | B3 | C3 | H3 | A4 | B4 | C4 | H4 | A6 | B6 | C6 | H6 | D |
| 6 ³ | - | - | - | - | 10 | 6 ³ / ₁₆ | 6 ⁶ / ₁₆ | 3½ | 10 | 5½ | 5 ¹⁵ / ₁₆ | 4½ | 7.38 | 6.62 | 6.16 | 5 ⁵ / ₁₆ | 2.50 |
| 8 | 12¼ | 8 | 8 ⁵ / ₈ | 2 ³ / ₁₆ | 12 ⁵ / ₁₆ | 8 ³ / ₁₆ | 8 ¹¹ / ₁₆ | 3¼ ¹⁶ | 12 ³ / ₈ | 7 ⁷ / ₈ | 7 ¹⁵ / ₁₆ | 5 ⁵ / ₈ | 9.63 | 8.64 | 8.18 | 6¼ | 3.00 |
| 8 X 10 | - | - | - | - | - | - | - | - | 14 ¹ / ₁₆ | 7 ³ / ₈ | 7 ¹⁵ / ₁₆ | 5 ⁵ / ₁₆ | - | - | - | - | - |
| 8 X 12 ³ | - | - | - | - | - | - | - | - | 16½ | 7 ³ / ₈ | 7 ¹⁵ / ₁₆ | 5 ⁵ / ₈ | - | - | - | - | - |
| 10 | 13 ⁷ / ₈ | 10 | 10 ¹⁰ / ₈ | 2½ | 13 ⁷ / ₈ | 10 ¹⁰ / ₁₆ | 10 ¹⁰ / ₄ | 3 ³ / ₁₆ | 14 ¹ / ₈ | 9 ⁹ / ₈ | 9 ⁷ / ₈ | 5 ³ / ₄ | 11.50 | 10.77 | 10.22 | 6 ⁶ / ₁₆ | 3.00 |
| 10 X 12 | - | - | - | - | - | - | - | - | 16 ³ / ₈ | 9 ³ / ₈ | 9 ⁷ / ₈ | 5 ⁷ / ₁₆ | - | - | - | - | - |
| 12 | 16 ⁶ / ₈ | 12 | 12½ | 2 ³ / ₈ | 16½ | 12 1 ¹ / ₁₆ | 12 ³ / ₄ | 2 ⁵ / ₈ | 16½ | 11 ³ / ₈ | 11 ⁷ / ₈ | 5 ¹⁵ / ₁₆ | 13.52 | 12.78 | 12.27 | 6 ⁶ / ₁₆ | 3.00 |
| 14 | 19 | 14 | 14½ | 2½ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15 X 14 | - | - | - | - | - | - | - | - | 19 ⁹ / ₁₆ | 14¼ | 14 ³ / ₄ | 15 ¹³ / ₁₆ | - | - | - | - | - |
| 16 | 22½ | 16 | 16 ⁶ / ₈ | 2 ⁷ / ₈ | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 18 | - | - | - | - | - | - | - | - | 23¼ | 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 1/2" 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.)