

# EARTH SHIELD®



## *Metallic Waterstop for Extreme Chemical Resistance*



***Earth Shield does fabricate custom waterstop profiles for our engineering and owner clients. Feel free to contact us directly if your project requires a fabricated profile that you do not see listed in our catalog. Additional grades and gauges are available (including copper, galvanized, carbon steel and others).***

**W**aterstops play a critical role in the integrity of concrete structures. They provide a fluid-tight diaphragm when embedded in, and running through concrete joints.

Earth Shield® Metallic Waterstop can stop even the most corrosive fluids in their tracks, even at severely elevated temperatures. A variety of metals, grades, and gauges are available. Earth Shield utilizes 20 gauge 316 low carbon as our standard alloy, which offers broad spectrum corrosion resistance to most aggressive media, and is virtually untouched by the deleterious effects of ozone, making it an ideal choice for ozone contactor structures used in modern water treatment plants.

Earth Shield Stainless Steel Waterstop is available in many standard shapes and sizes (see inside), including profiles for new construction and retrofit. All change of direction fabrications can be premanufactured leaving only straight butt welding for the field.

JP Specialties has been the respected innovator in the waterstop industry since 1954. We are known worldwide for our high-quality waterstop, and we hold the patent on the ST-10® In Line Waterstop Splicing Table and the XLT2000 Waterstop Fabrication Table — the equipment used to mechanically weld thermoplastic waterstops.

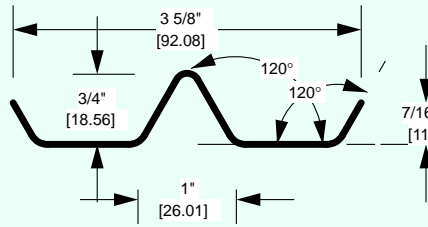
[www.earthshield.com/sswaterstop.html](http://www.earthshield.com/sswaterstop.html)

**Earth Shield® Chemical Resistant Waterstop**  
P.O. Box 1507, Lake Elsinore, CA 92531  
**Phone: 888-836-5778; Fax: 951-674-1315**  
E-mail: david@earthshield.com  
Web: www.earthshield.com

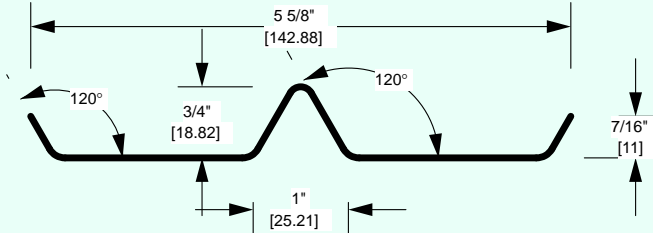


# Stainless Steel Waterstop Profiles

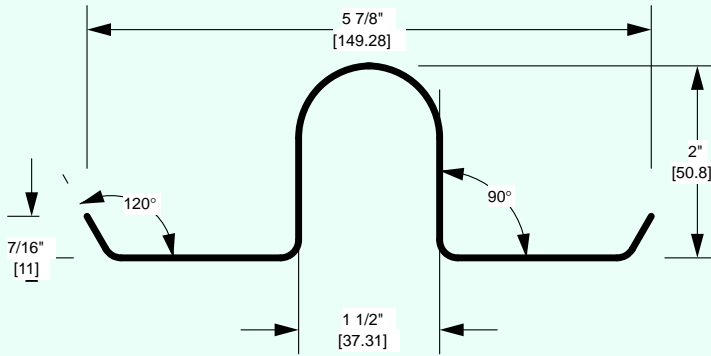
(custom profiles available)



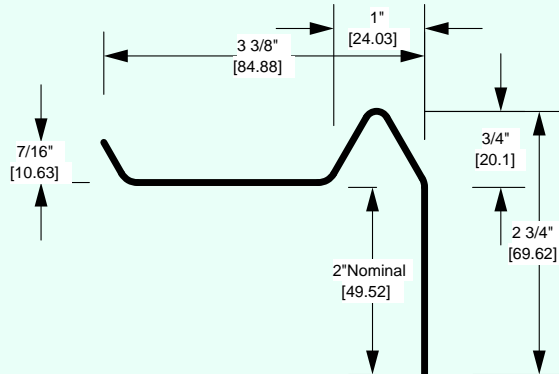
**part number: JP358**  
**4" Stainless Steel Waterstop**



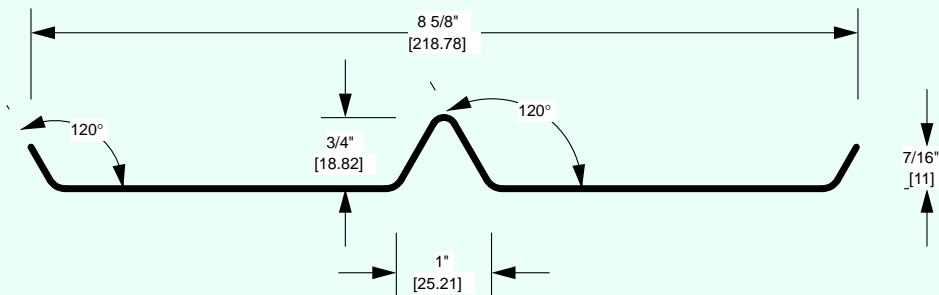
**part number: JP558**  
**6" Stainless Steel Waterstop**



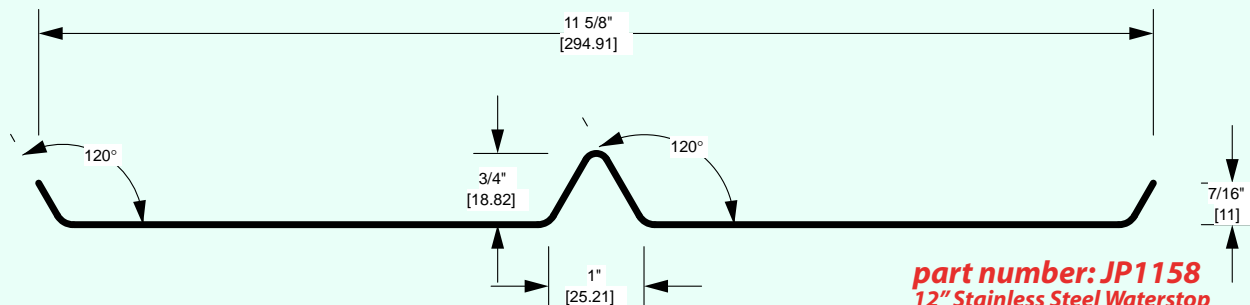
**part number: JP578**  
**6" Stainless Steel U-bulb Waterstop**



**part number: JP558R**  
**6" Stainless Steel Retrofit Waterstop**



**part number: JP858**  
**9" Stainless Steel Waterstop**

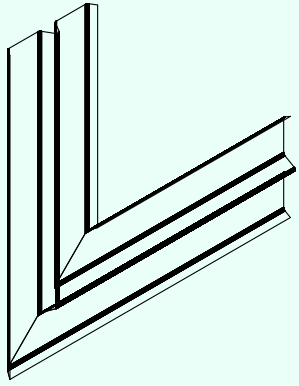


**part number: JP1158**  
**12" Stainless Steel Waterstop**

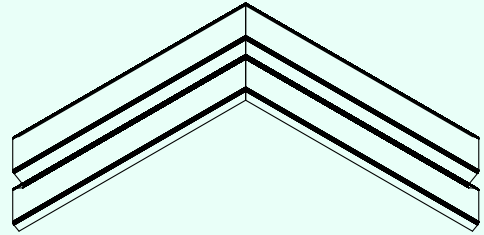
Full size CAD drawings available in printed or electronic format.

# Typical Shop Made Fittings

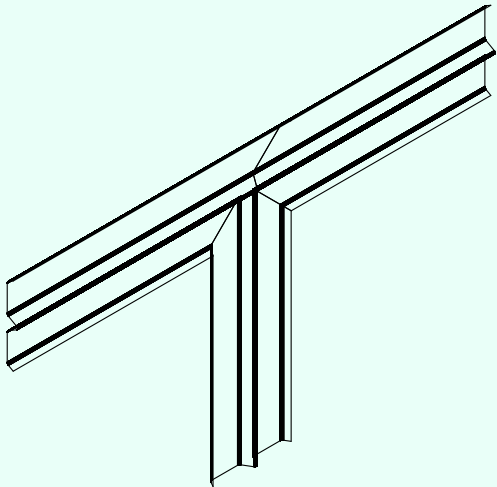
illustrated with JP558 (additional profiles and fittings available)



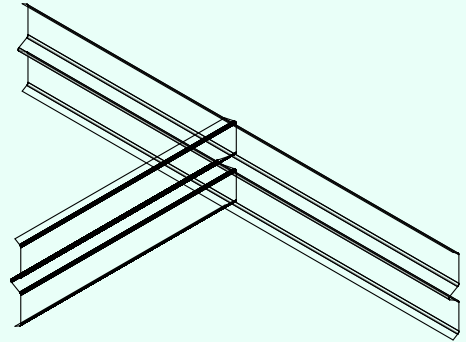
**part number: JP558L1**  
JP558 Flat Ell



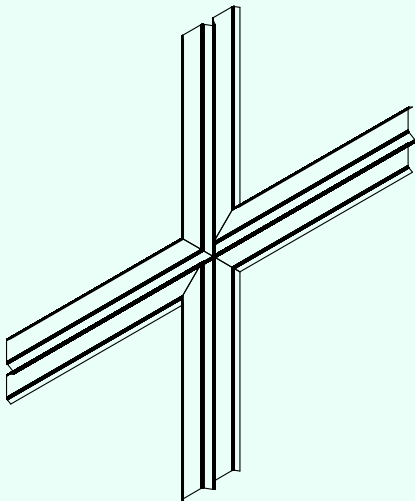
**part number: JP558L2**  
JP558 Vertical Ell



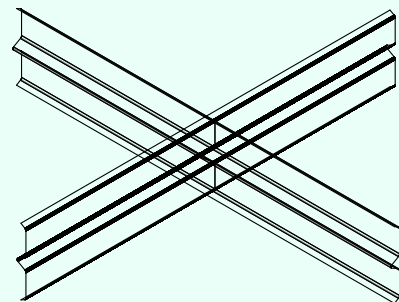
**part number: JP558T1**  
JP558 Flat Tee



**part number: JP558T2**  
JP558 Vertical Tee



**part number: JP558X1**  
JP558 Flat Cross



**part number: JP558X2**  
JP558 Vertical Cross

## Suggested Short Form Guide Specification

### Stainless Steel Chemical and Ozone Resistant, High Temperature Waterstop

Waterstop indicated in drawings and specifications for contraction (control), expansion and construction joints to be Earth Shield® Stainless Steel (S/S) **Part No. #####** [Designer insert appropriate part number here] as manufactured by **JP Specialties, Inc.** — 551 Birch Street, Lake Elsinore, CA 92530 — Phone 888-836-5778; International 951-674-6869; Fax 951-674-1315; Web [www.earthshield.com](http://www.earthshield.com); E-mail [davidp@earthshield.com](mailto:davidp@earthshield.com)

1. *Stainless steel waterstop shall conform to ASTM A 240 (type 316L), be 20 gauge thick, and manufactured specifically as a waterstop, with outer flanges and center "V", as opposed to flat steel.*
2. *No equals or substitutions allowed.*

### Shop Made Fittings

Intersection and change of direction stainless steel waterstops shall be shop fabricated as manufactured by **JP Specialties, Inc.** — 551 Birch Street, Lake Elsinore, CA 92530 — Phone 888-836-5778; International 951-674-6869; Fax 951-674-1315; Web [www.earthshield.com](http://www.earthshield.com); E-mail [davidp@earthshield.com](mailto:davidp@earthshield.com)

1. *No equals or substitutions allowed.*

[www.earthshield.com/specifications.html](http://www.earthshield.com/specifications.html)



**EARTH SHIELD®**  
Manufactured by **JP SPECIALTIES, INC.**  
Waterstops for Chemical, Industrial, & Environmental Applications

Applications | Product | Specifications | Tech Library | Availability | Contact Us

Waterstop plays a critical role in the integrity of concrete structures. It provides a fluid-tight diaphragm when embedded in, and running through concrete joints. Earth Shield® Thermoplastic Elastomeric Rubber Waterstop (TPER / TPV), by JP Specialties, Inc., greatly expands the scope of conventional waterstop by offering unmatched chemical resistance to a broad spectrum of aggressive chemicals, solvents, and hot petroleum oils. Manufactured NSF certified, EPA-compliant profiles are available for new construction and retrofit, as well as the necessary tools and accessories for proper field installation.

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Retrofit Column & Pipe Fitting  
Earth Shield® Column Fitting (part no. JP200LC1-XX" 1"XX is the diameter in inches) manufactured with a flexible, chemical-resistant polymer and stainless steel anchoring hardware.

Earth Shield Advantages	Typical Applications	Fast Clicks (most popular)
<ul style="list-style-type: none"> <li>Outstanding fluid resistance to a wide range of deleterious fluids such as acids.</li> </ul>	<ul style="list-style-type: none"> <li>Primary and Secondary Containment</li> <li>Waste Water Treatment Plants</li> </ul>	<ul style="list-style-type: none"> <li>Global Centerbulk Waterstop</li> <li>Retrofit Waterstop</li> <li>Hydrophilic Waterstop</li> </ul>

Visit Earth Shield on the Web at [www.earthshield.com](http://www.earthshield.com) for all the latest information

## Stainless Steel Waterstop Typical Physical Properties

Property	Test Method	Required Result
Tensile Strength	ASTM A240	70,000 psi
Elongation in 2" min.	ASTM A240	40%
Yield Strength	ASTM A240	25,000 psi
Rockwell B Hardness	ASTM A240	95

### Installation and Execution

Waterstop, Installations and Splices — Waterstops shall be installed at the locations shown to form a continuous fluid-tight diaphragm. Adequate provision shall be made to support and completely protect the waterstops during the progress of the work. Exposed waterstops shall be protected during application of form release agents to avoid being coated. Suitable guards shall be provided to protect exposed projecting edges and ends of partially embedded waterstops from damage when concrete placement has been discontinued. Splices shall be made by certified, trained personnel using approved equipment and procedures.

A. Stainless Steel — Splices in stainless steel waterstops shall be welded using a TIG (recommended) or MIG process utilizing a weld rod to match the stainless (weld rod: 316L; diameter — .035 to .045). Damaged waterstops shall be repaired by removing damaged portions and patching. Patches shall overlap a minimum of 1 inch onto undamaged portion of the waterstop. Weld all straight run material edge-to-edge (no overlapping). Assure back side (or open end of the "V") is covered completely with tape prior to concrete pour. This allows the center "V" to remain open allowing for joint movement.

### Preparation

- Position waterstop to ensure proper distance from steel reinforcing bars to prevent rock pockets and honey comb.
- Protect waterstop from damage during progress of work.
- Clean concrete joint after first pour to remove debris and dirt.

### Examination and Inspection

- Prior to placement of concrete notify engineer for field inspection approval.
- Upon inspection of waterstop installation, replace any damaged or unacceptable waterstop and dispose of defective material.

### Installation

- Position waterstop in joint as indicated on drawings.
- Center waterstop on joint, with approximately one-half of waterstop width to be embedded in concrete on each side of the joint.
- Allow clearance between waterstop and reinforcing steel of a minimum two times the largest aggregate size. Prevent rock pockets and air voids caused by aggregate bridging.
- Carefully place concrete without displacing waterstop from proper position.
- Thoroughly and systematically vibrate concrete in the vicinity of the joint, and to maximize intimate contact between concrete and waterstop.
- After first pour, clean unembedded waterstop leg to ensure full contact of second concrete pour. Remove laitance, spillage, form oil and dirt.

**Free Stainless Steel Welding DVD with all orders**



Now complete the weld, beginning at the base of the other side and finishing up with the center "V".

