EARTH SHIELD®

Waterstops for Chemical, Industrial, & Environmental Applications

All ribbed Earth Shield® Waterstop profiles are available with factory installed brass eyelets. The eyelets provide for a convenient and durable tie-off point for wire tying the waterstop to the steel reinforcement prior to the concrete pour.

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

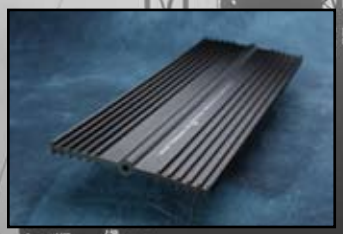
Earth Shield® Thermoplastic Vulcanizate Waterstop (TPV), by JP Specialties, Inc., greatly expands the scope of conventional waterstop by offering unmatched chemical resistance to a broad spectrum of aggressive chemicals, solvents, and hot petroleum oils. Manufactured NSF certified, EPA-compliant waterstop profiles are available for new construction and retrofit, as well as the tools and accessories for proper field installation.

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 — the equipment used to mechanically weld thermoplastic waterstops.

GreenSpec® LISTED

Earth Shield® Retrofit Column and Pipe Fitting (part number JP320LC1.XX* [*XX is diameter in inches]) is manufactured with a flexible, chemical-resistant polymer and includes all stainless steel anchoring hardware.

See page 7 for more info



Earth Shield® JP636 TPV Ribbed Centerbulb (6" width) is the industry standard, utilized on most jobs for its proven fluid-sealing properties.

See page 4 for more info

Earth Shield® Chemical Resistant Waterstop
P.O. Box 1507, Lake Elsinore, CA 92531
Phone: 888-836-5778; International: 951-674-6869
Fax: 951-674-1315
www.earthshield.com

Thermoplastic Vulcanizate (TPV / TPER) Waterstop Basic Use

Earth Shield® Thermoplastic Vulcanizate Waterstop is used as a fluid-tight diaphragm, embedded in concrete, across and along the joint, for primary and secondary containment structures. Earth Shield® Chemical Resistant Waterstops are resistant to a wide range of oils, solvents, and aggressive chemicals. Alcohol, ketones, glycols, esters, and aqueous solutions of acids, salts, and bases have little effect on Earth Shield® Thermoplastic Vulcanizate Waterstop.

Unlike polyvinyl chloride (PVC) waterstop, Earth Shield® waterstop contains no plasticizer, stabilizer, or filler to leech out when exposed to chemicals, fuels, and aggressive industrial fluids. Also, unlike PVC waterstop, Earth Shield® can withstand prolonged exposure to high and low temperatures (-78°F to 275°F long term) without detrimental effect.

Earth Shield® TPV Waterstop is NSF Standard 61 Certified for use in drinking water and is made of a recyclable polymer, so it's good for health and the environment.
www.earthshield.com/Waterstop_for_Concrete_Joints/nsf_certified_waterstop.html

The superior chemical resistance of Earth Shield® Thermoplastic Vulcanizate Waterstop is enhanced by the use of a ribbed centerbulb configuration, which is available in a 4, 6, and 9-inch width. This provides for greater mechanical bonding with the concrete and a barrier against migration of liquid flow around the waterstop. The ribbed centerbulb style also allows for joint movement and may be used in above or below grade applications. Additional shapes are available for retrofit, extreme expansion, stainless steel and base seal applications.

Different varieties and grades of thermoplastic elastomers (TPE) are commercially available. On the low-end there is thermoplastic polyolefin (TPO), which has a rubber phase that is not cross-linked. On the high-end there is thermoplastic vulcanizate (TPV)... ***Earth Shield® has chosen a fully cross-linked TPV as our standard elastomer compound,*** which provides superior mechanical properties, retention, and chemical resistance. In fact, when compared side-by-side, no competitive product is even close to achieving the physical properties of Earth Shield®.

Typical Applications

- Primary and secondary containment
- Waste water treatment plants
- Refineries
- Ozone contactor structures
- Mining facilities
- Fueling areas
- Chemical factories
- Manure pits

Earth Shield® Advantages

- Outstanding fluid resistance to a wide range of aqueous-based fluids, oils, and hydrocarbons
- Excellent retention of physical properties at elevated temperatures
- Superior ozone and weather resistance

Installation

Install Earth Shield® TPV Waterstop in all concrete joints. Waterstop should be centered in, and run the extent of the joint. All changes of direc-

tions should be prefabricated (see Shop Made Fittings), leaving only butt-welding for the field. If installing in an expansion joint, keep center bulb unembedded to allow it to accommodate movement as designed. Use optional factory installed brass eyelets (or #3 hog rings) and tie wire to secure waterstop to reinforcing steel to avoid displacement during the concrete pour. Splice straight lengths of waterstop, and Shop Made Fittings to straight lengths, with an ST-10® In Line Waterstop Splicer with the iron temperature set to 410˚F to 430˚F. *More detailed installation instructions can be found in our Standard 3-part Specifications.*

Technical Assistance

Qualified technical assistance is available during any phase of your construction project.

Specifications

Standard 3-part Specifications are available at our website in Microsoft® Word and Adobe® PDF format, and upon request in printed and a variety of computer word processor formats. Call our Technical Sales Staff for additional help with your specification.
www.earthshield.com/Waterstop_for_Concrete_Joints/specifications.html

Suggested Proprietary Short Form Guide Specification Section 03150 (Master Format 2004 — 03 15 13)

TPV Chemical Resistant Waterstop

Waterstop indicated in drawings and specifications for contraction (control), expansion and construction joints to be **Earth Shield® TPV Chemical Resistant Waterstop Part No.** #### [Designer insert appropriate part number here] as manufactured by JP Specialties, Inc.; 551 Birch Street, Lake Elsinore, CA 92530; Phone 951-674-6869

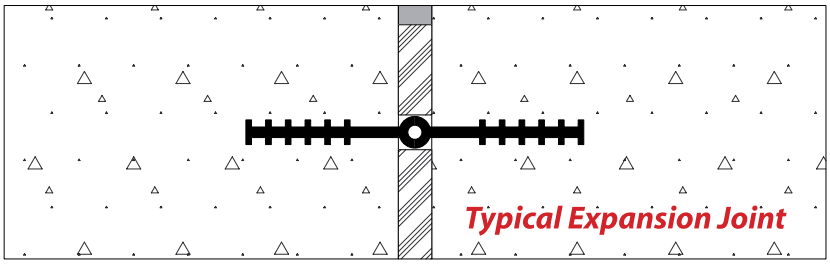
1. Thermoplastic Vulcanizate (TPV) Waterstop shall conform to EPA Title 40 CFR Section 265.193. The suitability of the waterstop for a specific application should be determined by specific testing for that particular requirement per ASTM D471. Project-specific certification to be provided by the manufacturer.
2. Thermoplastic Vulcanizate (TPV) Waterstop shall be independently certified for use in potable water per NSF/ANSI Standard 61. Third-party certified documentation to be provided by the manufacturer.
3. No equals or substitutions allowed.

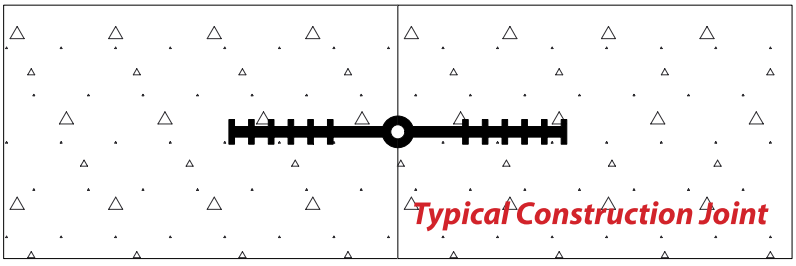
Property	Test Method	Required Results
Specific Gravity	ASTM D792	.96
Shore A Hardness (5 sec.)	ASTM D2240	90±3 at 77°F
Tensile Strength	ASTM D412	2,300 psi
Ultimate Elongation	ASTM D412	530%
100% Modulus	ASTM D746	1,000 psi
Tear Strength	ASTM D624	278 pli at 77°F
Compression Set	ASTM D395	29% at 77°F
Brittle Point	ASTM D746	-78°F
Drinking Water Safe	NSF/ANSI 61	Waterstop certified by NSF for use in potable water
Ozone Resistance	ASTM D1171	Passed, no cracking at 500 pphm
Chemical Resistance	ASTM D471	Meet or exceed specific testing standards for contained fluids as required by Owner and *certified* by Manufacturer
Green Certification	GreenSpec	Approved

Ribbed Centerbulb

for Moving and Non-Moving Joints

Ribbed centerbulb is the most versatile type of waterstop available. The centerbulb accommodates lateral, transverse, and shear movement. Ribbed centerbulb can be used in expansion, construction, and control joints.

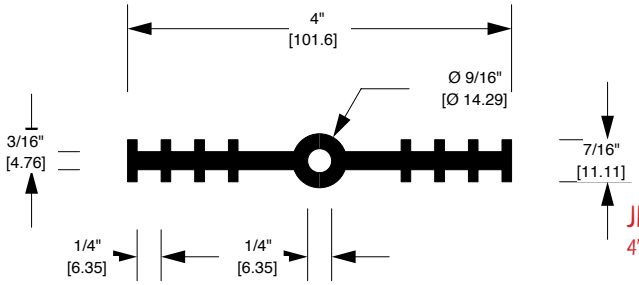




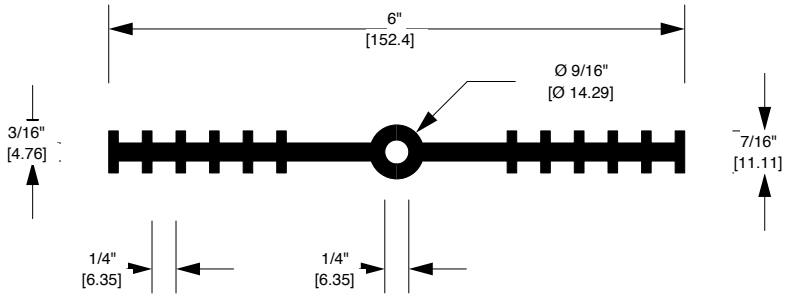
Ribbed centerbulb waterstops provide superior anchoring abilities and a long fluid-flow path because of the multiple ribs on the exterior flanges. Under stress, the multiple ribs will distort less than a dumbbell type waterstop. This is because the stress is first applied to the inward-most anchoring rib, and decreases to the subsequent ribs.

The centerbulb allows for joint movement beyond the ultimate elongation of the material (530%), without causing distortion to anchoring ribs. All of our ribbed centerbulb waterstops are manufactured with a 9/16" outer diameter centerbulb, which is the largest in the industry. This centerbulb, coupled with the outstanding mechanical properties of our proprietary TPV elastomer (ultimate elongation, tensile strength, etc.), provides for unsurpassed joint movement and sealing abilities.

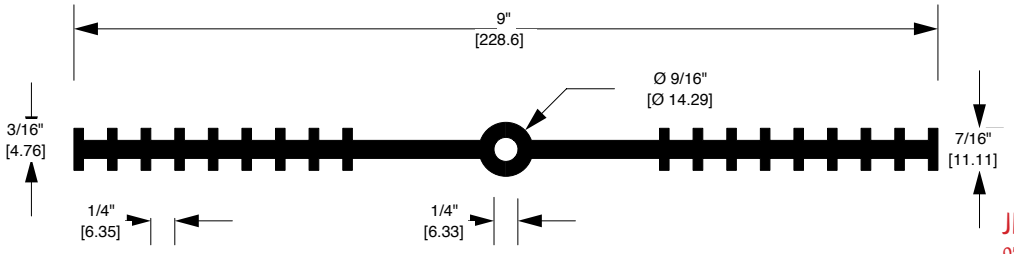
Like all our thermoplastic vulcanizate waterstops, ribbed centerbulb can be heat-welded using a standard waterstop splicing iron. This allows for easy field fabrications, and allows the waterstop to function as a continuous, homogeneous, fluid-tight diaphragm. Waterstop change of directions (fittings) can be purchased along with straight roll stock, and custom, fit-to-print waterstop modules are produced to order.



JP436 (with eyelets: EYJP436)
4" Ribbed Centerbulb Waterstop



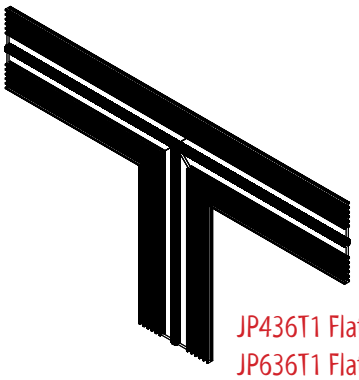
JP636 (with eyelets: EYJP636)
6" Ribbed Centerbulb Waterstop



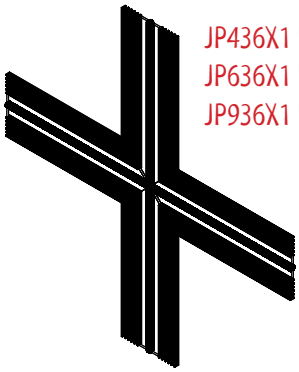
JP936 (with eyelets: EYJP936)
9" Ribbed Centerbulb Waterstop

Standard Fabrications

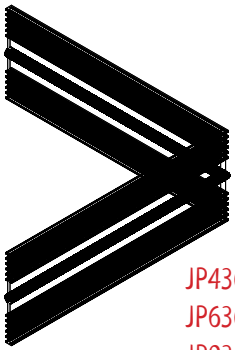
JP436L1 Flat Ell
JP636L1 Flat Ell
JP936L1 Flat Ell



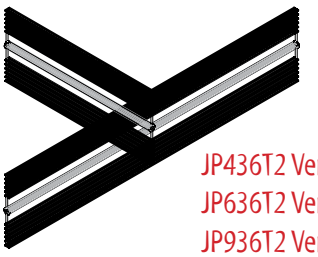
JP436T1 Flat Tee
JP636T1 Flat Tee
JP936T1 Flat Tee



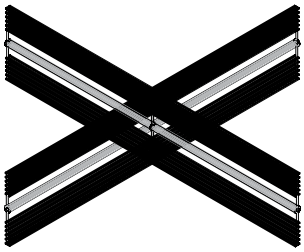
JP436X1 Flat Cross
JP636X1 Flat Cross
JP936X1 Flat Cross



JP436L2 Vert Ell
JP636L2 Vert Ell
JP936L2 Vert Ell



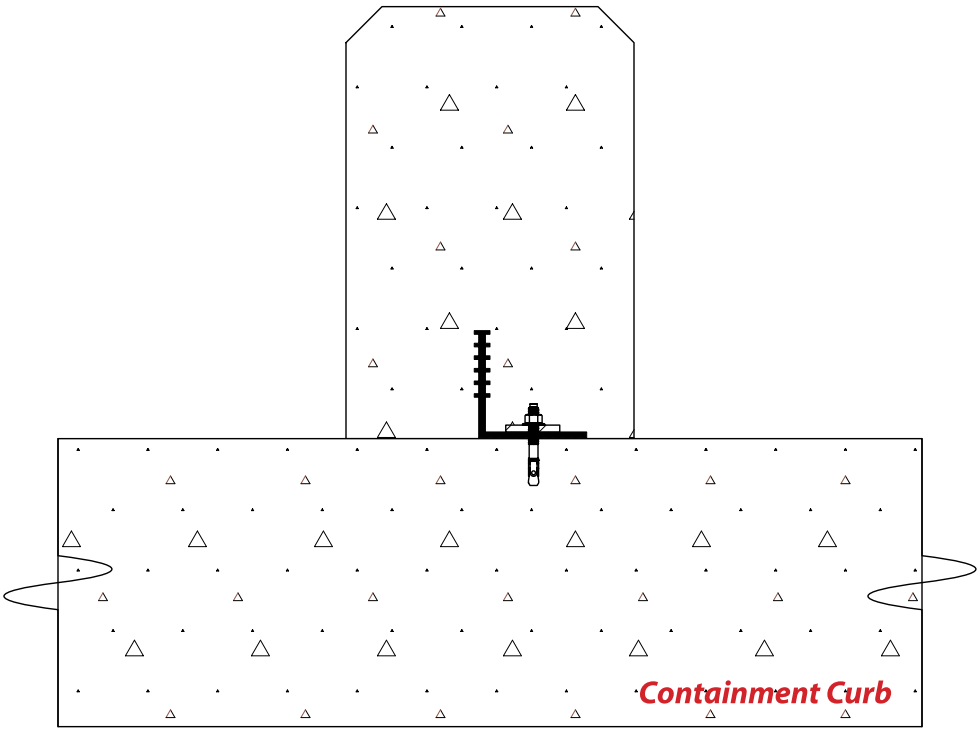
JP436T2 Vert Tee
JP636T2 Vert Tee
JP936T2 Vert Tee



JP436X2 Vert Cross
JP636X2 Vert Cross
JP936X2 Vert Cross

Retrofit Waterstop Systems

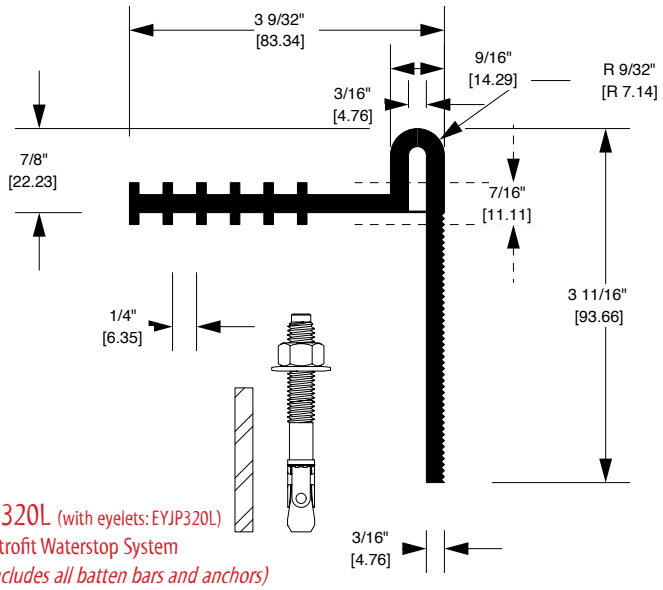
for New to Existing Concrete Joints



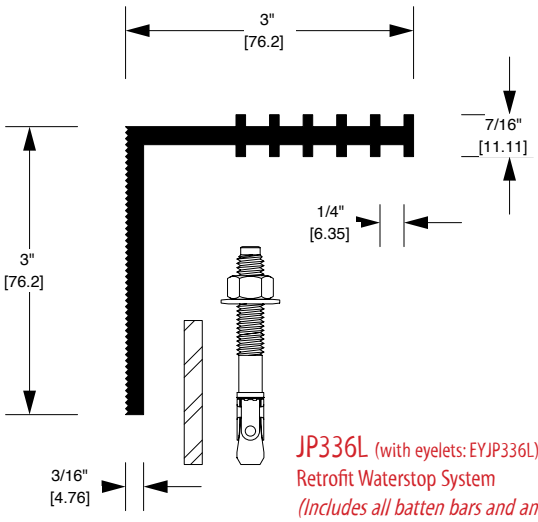
Retrofit waterstop is designed to provide a fluid-tight seal between existing and new concrete construction, without resorting to the labor-intensive and structurally destructive saw-cut-and-grout method. It is ideal for constructing a new containment curb or wall to an existing slab, or joining a new slab to an existing wall. Special profile fabrications are available for columns and pipe penetrations.

All of our retrofit waterstops are sold as a system, and include all the necessary stainless steel bars and bolts. We also offer a high-quality chemical resistant novolac epoxy — VEN 1000. Earth Shield® retrofit waterstops are manufactured with our proprietary thermoplastic vulcanizate compound, which provides for unsurpassed chemical resistance.

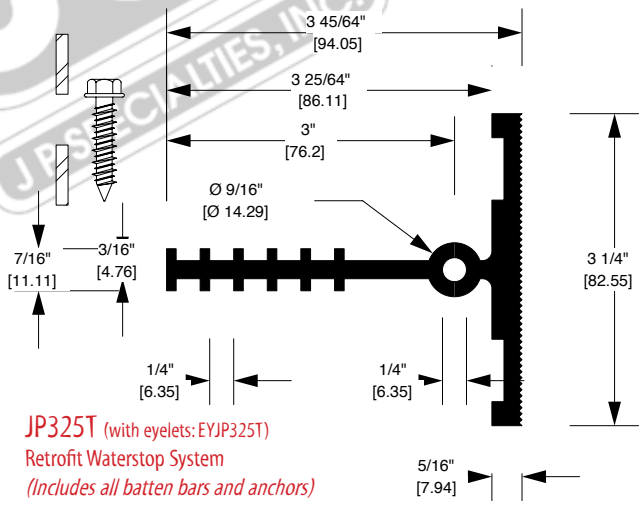
Like all our thermoplastic vulcanizate waterstops, Earth Shield® retrofit can be heat-welded using a standard waterstop splicing iron. This allows for easy field fabrications, and allows the waterstop to function as a continuous, homogeneous, fluid-tight diaphragm. Waterstop change of directions can be purchased along with straight roll stock, and custom, fit-to-print waterstop modules are produced to order. Prefabricated ells, tees, tank pads, column fittings, and many others are in stock and ready to ship.



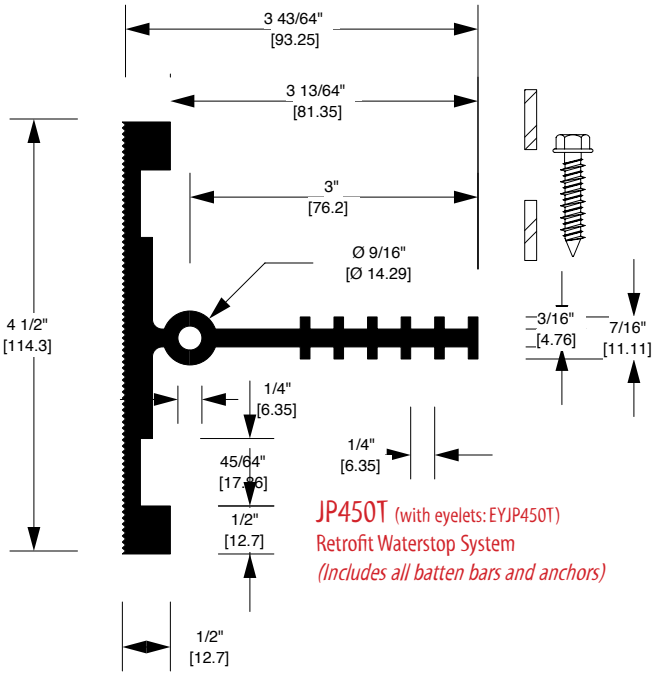
JP320L (with eyelets: EYJP320L)
Retrofit Waterstop System
(Includes all batten bars and anchors)



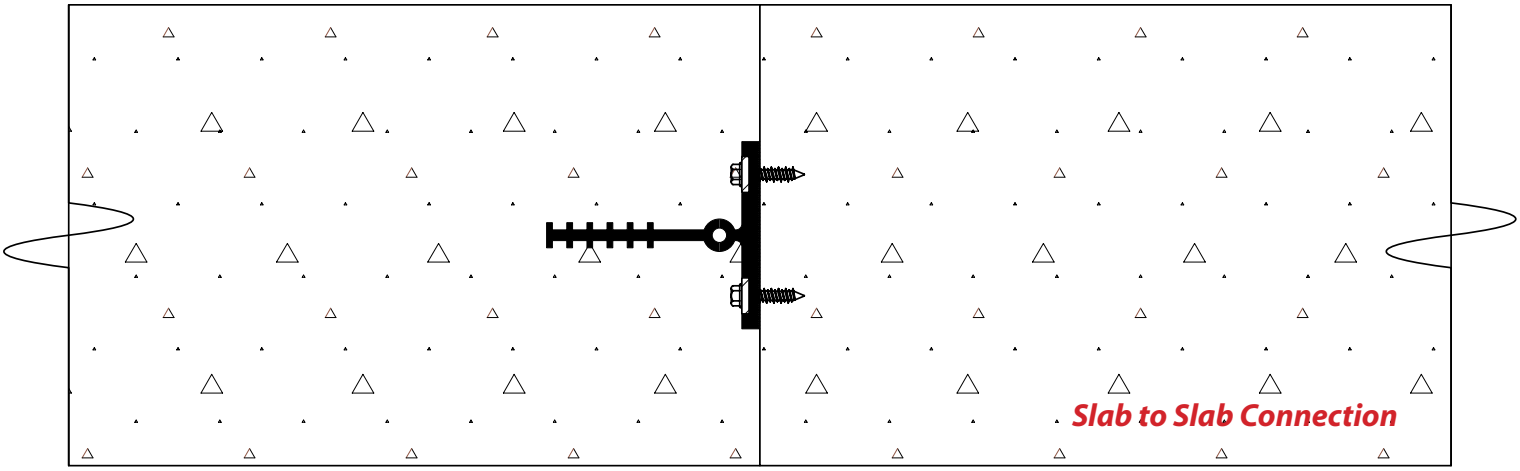
JP336L (with eyelets: EYJP336L)
Retrofit Waterstop System
(Includes all batten bars and anchors)



JP325T (with eyelets: EYJP325T)
Retrofit Waterstop System
(Includes all batten bars and anchors)



JP450T (with eyelets: EYJP450T)
Retrofit Waterstop System
(Includes all batten bars and anchors)



Earth Shield® has solved a long-standing problem for engineered concrete structures with circular protrusions, such as columns, pipes, piers, and pilasters. The problem: how to permanently seal the concrete joint when cast-in-place concrete is formed against an existing circular member. The solution: Earth Shield® Column & Pipe Fitting (part no. JP320LC1.XX* *[*XX is the diameter in inches]*) manufactured with a flexible, chemical-resistant polymer and stainless steel anchoring hardware. A single laborer on the job site can quickly install the column fitting and its associated hardware. Simply apply an epoxy gel bed to the existing surface; place the polymer ring into the epoxy gel bed; heat weld the single opening on the polymer ring using a waterstop splicing iron; and finally, complete the system with the stainless steel closure ring.

The Earth Shield® system functions as an internal dam, centrally located within the cast concrete, to stop aggressive chemicals, solvents and hot petroleum oils from penetrating the joint. By preventing the passage of hazardous liquids the Earth Shield® Column Fitting provides facility owners, engineers, and contractors with the necessary EPA-mandated containment compliance (EPA Title 40 CFR 265.193). Of course, the system prevents the passage of water as well. The mechanical properties of the polymer, plus the tear-web design of the JP320L profile, enable the column fitting to function equally well in expansion (isolation) joints and construction joints.

Integrated Cap Systems

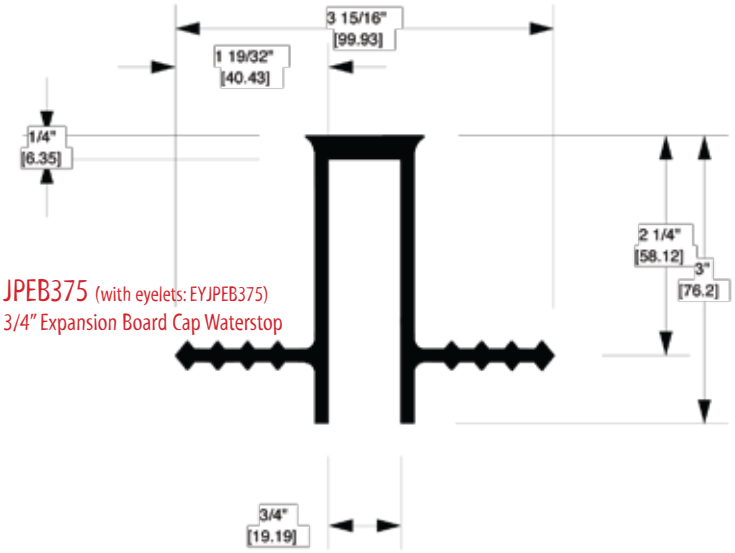
Integrated Waterstop and Joint Sealant

Integrated expansion board cap waterstop systems are designed to replace post-applied joint sealant, and provide a fluid-tight internal seal like a traditional waterstop with a one-step, integrated unit.

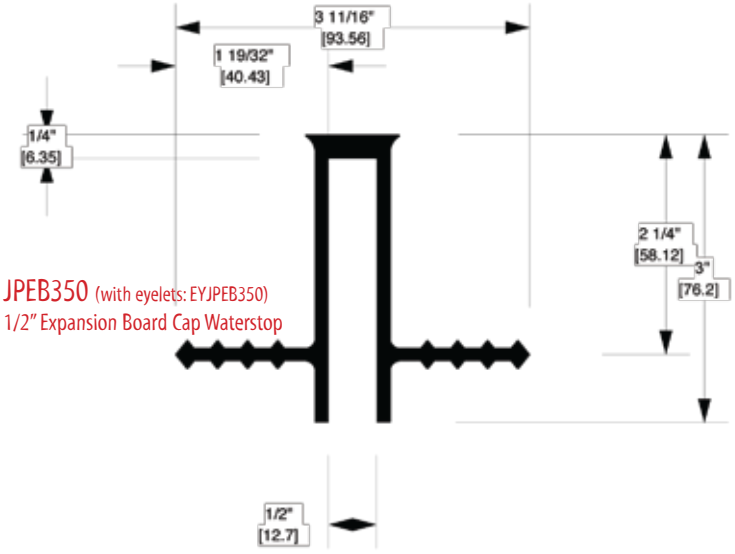
Earth Shield® expansion board cap waterstop is installed on top of conventional expansion board filler. The expansion board acts as the form; therefore, no form splitting is necessary. This greatly accelerates the project schedule and provides a long lasting, attractive finished concrete joint.

Earth Shield® screed key cap slides over the top of metal screed key, eliminating the need for sealant.

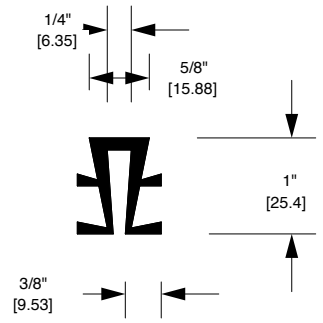
- No split forms
- Accelerated installation
- No sawcutting or sealant
- No joint finishing
- Long life
- UV and abrasion resistant



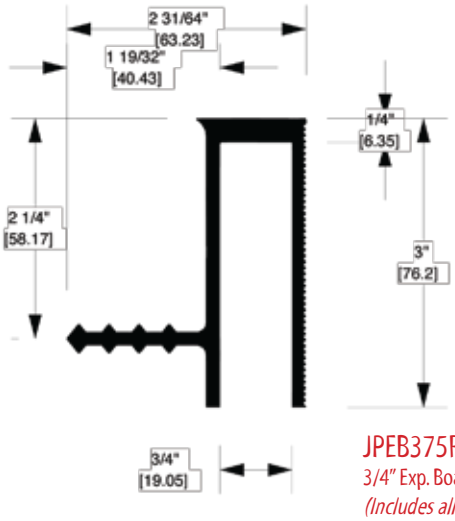
JPEB375 (with eyelets: EYJPEB375)
3/4" Expansion Board Cap Waterstop



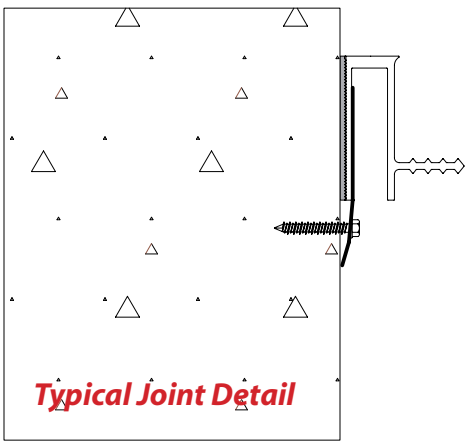
JPEB350 (with eyelets: EYJPEB350)
1/2" Expansion Board Cap Waterstop



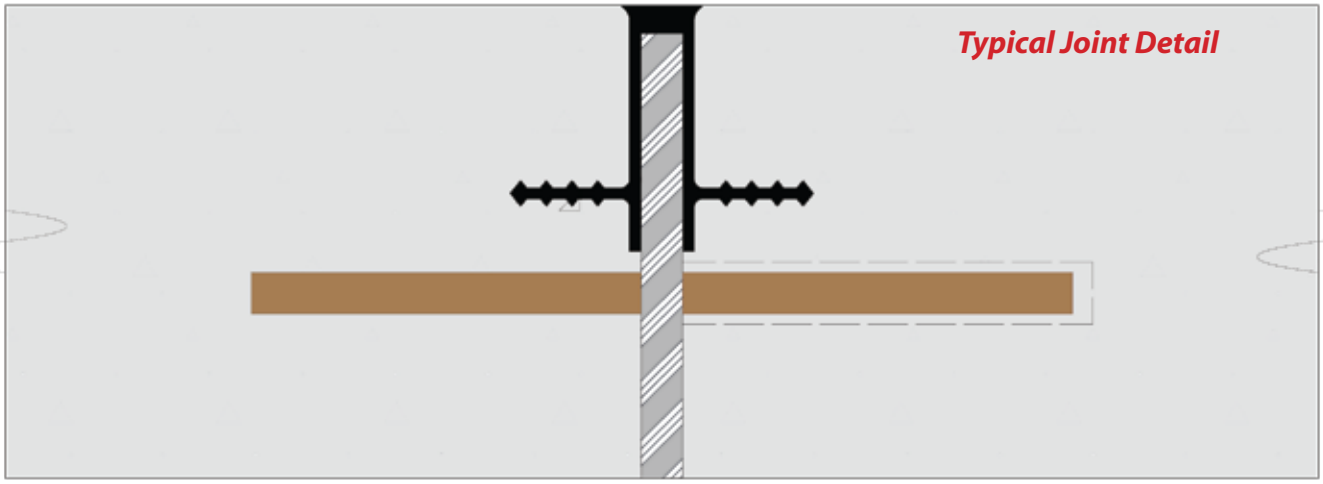
JP158
Screed Keyway Cap



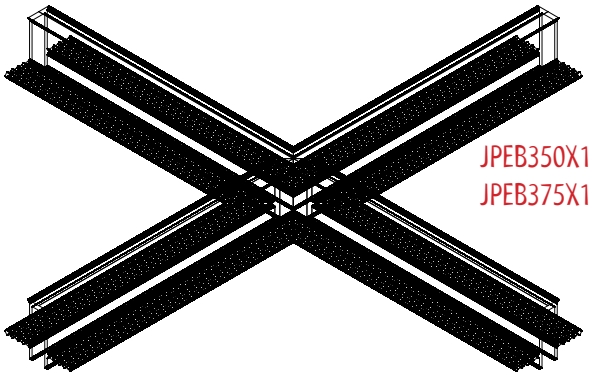
JPEB375R (with eyelets: EYJPEB375R)
3/4" Exp. Board Cap Retrofit Waterstop
(Includes all batten bars and anchors)



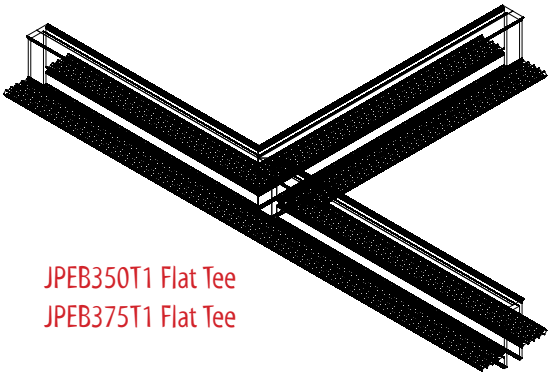
Typical Joint Detail



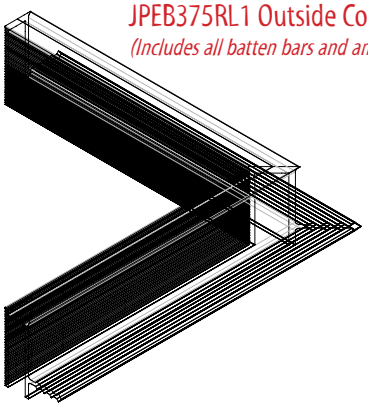
Standard Fabrications



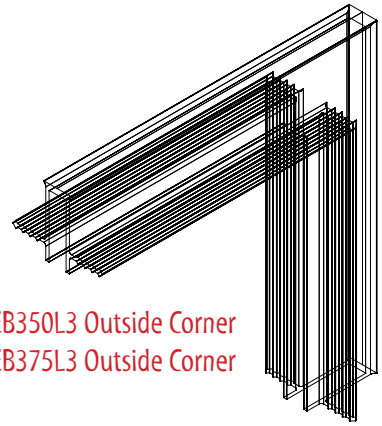
JPEB350X1 Flat Cross
JPEB375X1 Flat Cross



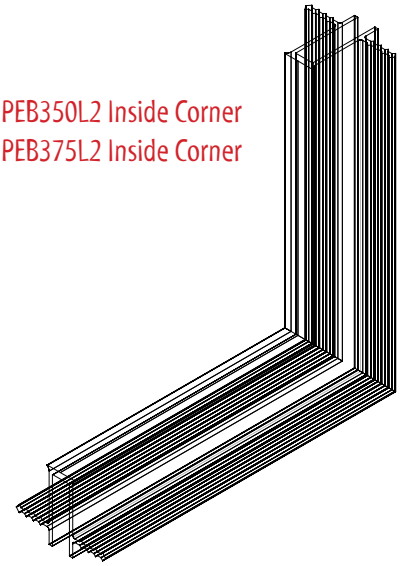
JPEB350T1 Flat Tee
JPEB375T1 Flat Tee



JPEB375RL1 Outside Corner
(Includes all batten bars and anchors)

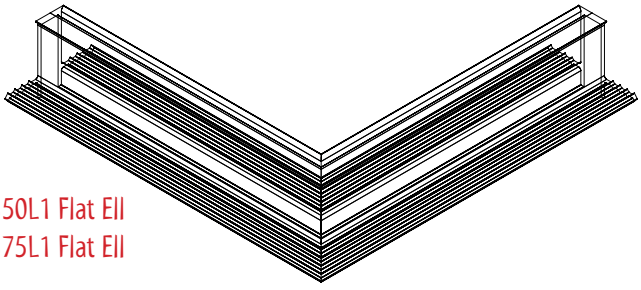


JPEB350L3 Outside Corner
JPEB375L3 Outside Corner



JPEB350L2 Inside Corner
JPEB375L2 Inside Corner

JPEB375RL2 Inside Corner
(Includes all batten bars and anchors)

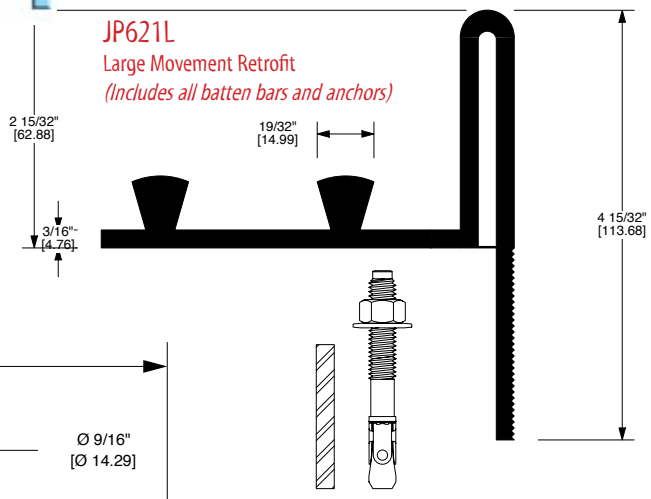


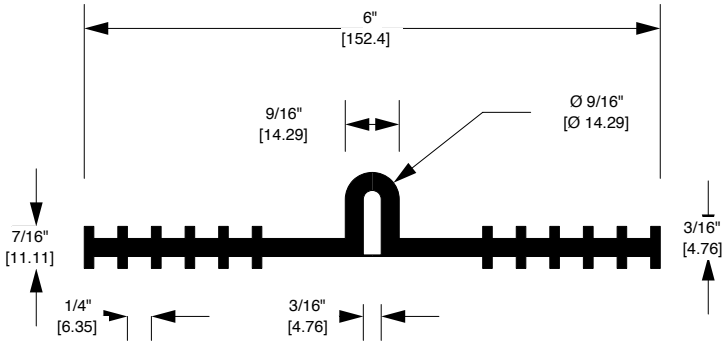
JPEB350L1 Flat Ell
JPEB375L1 Flat Ell

Special Shapes
for Large Movement Joints

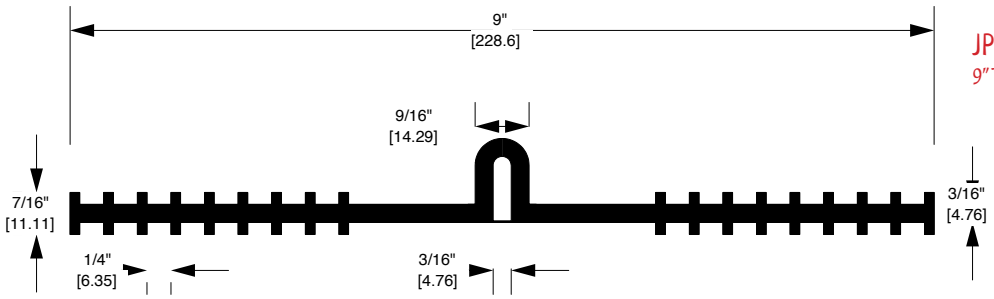
Earth Shield® tear web waterstops are designed for large joint movements such as tank foundations. Tear web is suitable for expansion joints. For construction and contraction (control) joints, ribbed centerbulb should be used instead.

JP621L
Large Movement Retrofit
(Includes all batten bars and anchors)





JP678 (with eyelets: EYJP678)
6" Tear Web Waterstop

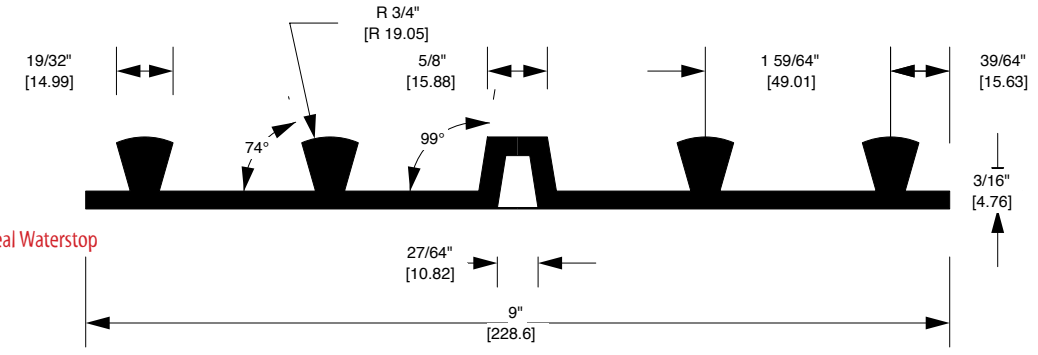


JP978 (with eyelets: EYJP978)
9" Tear Web Waterstop

Base Seal (aka Rearguard)
for Flatwork and Bund Wall Applications

Base seal waterstop is ideal for flat pavement jobs such as runways, large containment slabs, etc. Base seal waterstop is by far the easiest waterstop to install... Simply lay the waterstop directly on the compacted subgrade, place and finish concrete, and create control joint using saw cut or other method. The base seal provides a permanent, life-of-structure seal at the bottom of the joint.

Base seal is suitable for construction, contraction (control), and expansion joints. Base seal should not be used on jobs that make interior wall transitions as the part is non-symmetrical and therefore cannot function correctly. For large hydrostatic head pressures (>50 foot) ribbed centerbulb should be used instead.

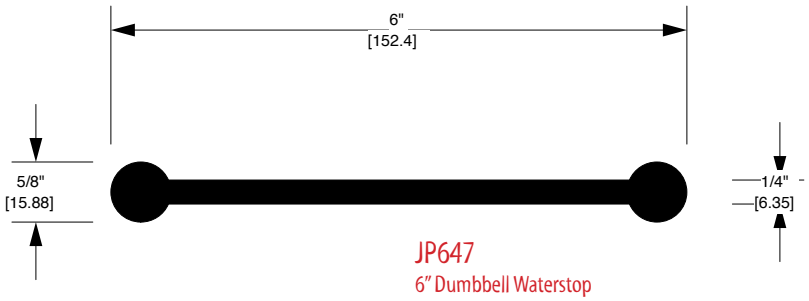


JP211
9" Base Seal Waterstop

Dumbbell

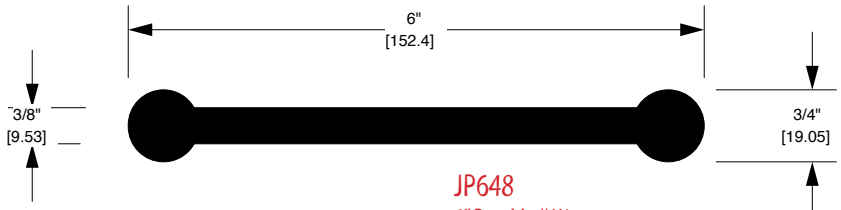
Large Web Thickness for Heavy Concrete

Dumbbell waterstop is usually used in below grade applications, where limited movement is expected. Dumbbell waterstop can be installed in construction and contraction (control) joints; whereas, dumbbell centerbulb can be installed in construction, control, and expansion joints.

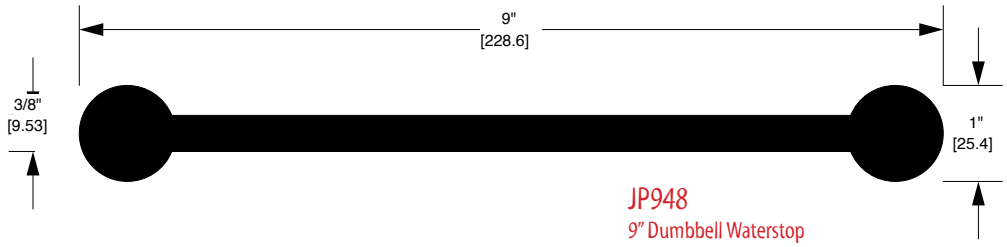


JP647
6" Dumbbell Waterstop

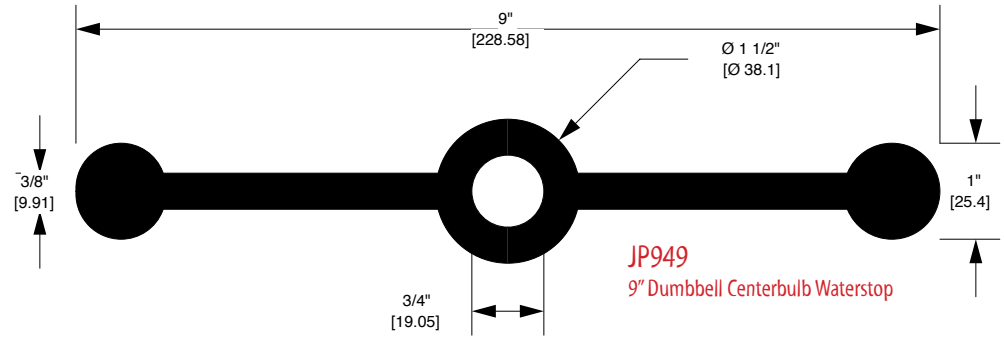
The large centerbulb (1-1/2" outer diameter) on the JP949 (and JP1149) waterstop profile, coupled with the outstanding mechanical properties of our thermoplastic vulcanizate and large endbulb anchors, enable the product to withstand large -scale joint movement (seismic, settlement, etc.). JP648, JP948, JP949 and JP1149 are all 3/8" thick... The largest and thickest profiles available in the industry!



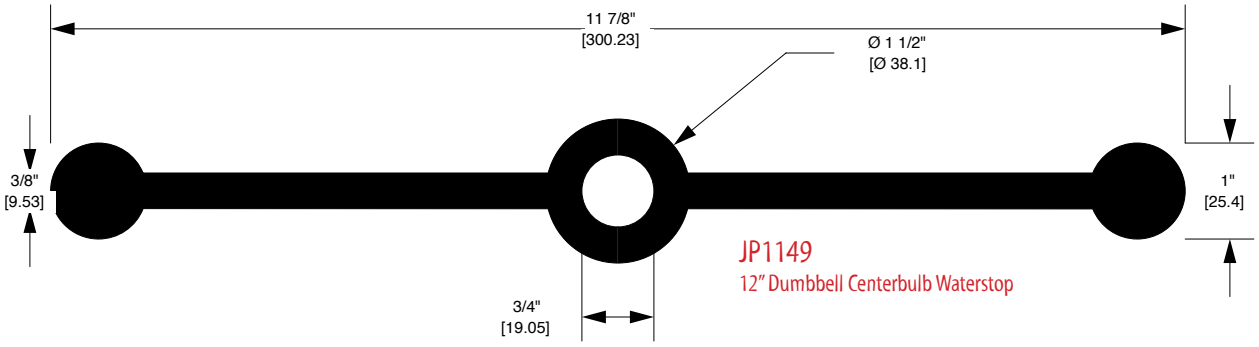
JP648
6" Dumbbell Waterstop



JP948
9" Dumbbell Waterstop

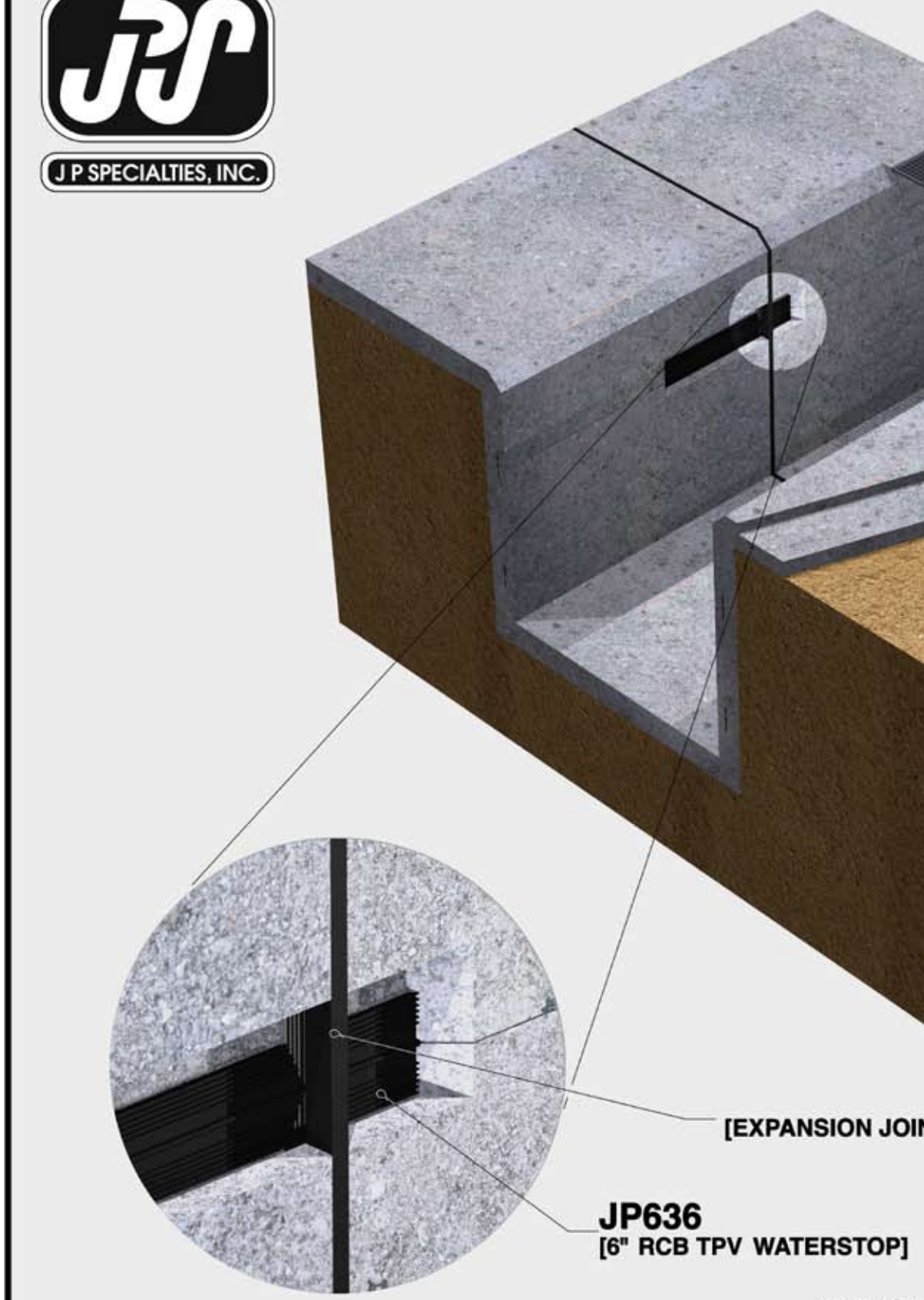


JP949
9" Dumbbell Centerbulb Waterstop



JP1149
12" Dumbbell Centerbulb Waterstop

J P SPECIALTIES, INC.

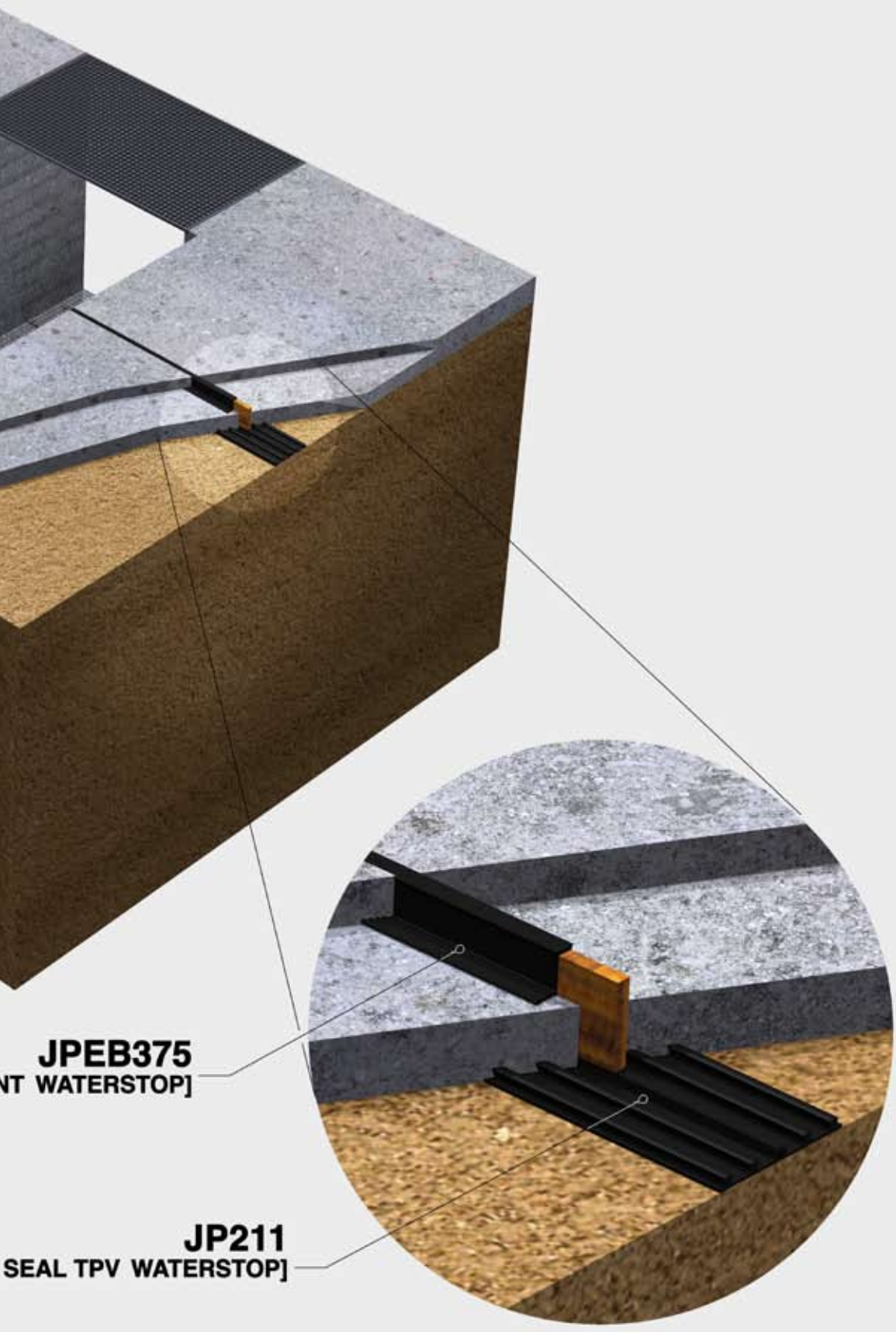


[EXPANSION JOI

JP636
[6" RCB TPV WATERSTOP]

[9" BASE

TYPICAL TRENCH EXPANSION JOINT

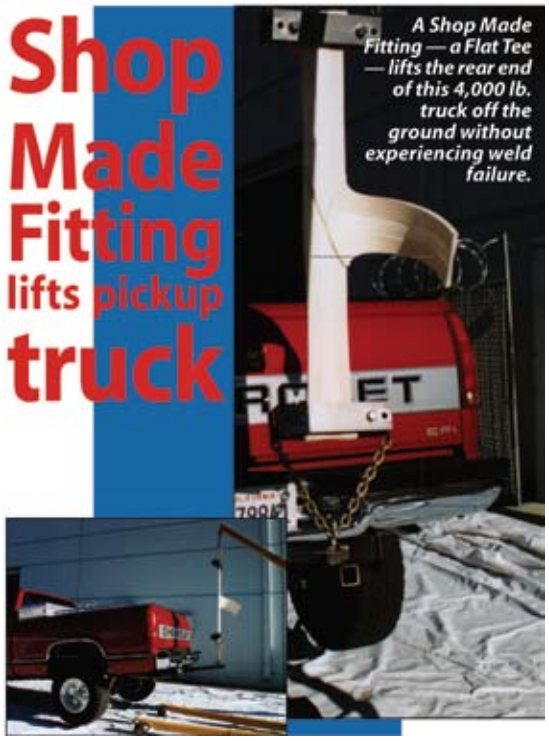


DRAWING CREATED 10/21/2009

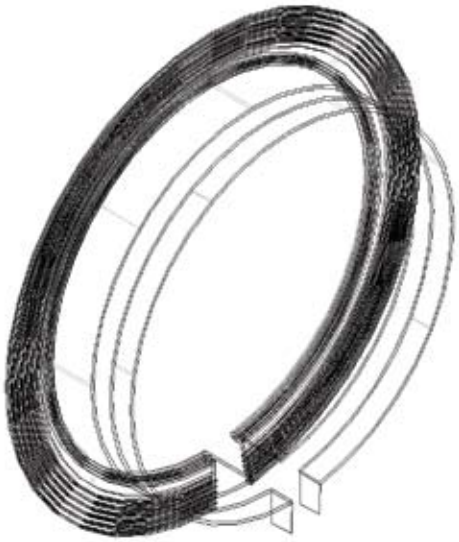
Waterstop Shop Made Fittings

Ensure A Quality Project

Testing has shown that the majority of waterstop failures are caused when the waterstop must make directional changes. This is because directional changes, or fittings as they are commonly known, require special tools and skills that are not generally required for welding the straight edges of waterstops. Consequently, the fittings are either made wrong (edge welding); there is no tensile strength in the welds; the material is charred, burnt or otherwise contaminated; or the worker's lack of experience causes unreliable welds. Shop Made Fittings are machine welded using an XLT-2000 Waterstop Splicing Table. JP Specialties invented the XLT-2000 and retains the patent on the technology. The XLT-2000 applies force evenly, creating monolithic, homogeneous and contaminant-free welds.

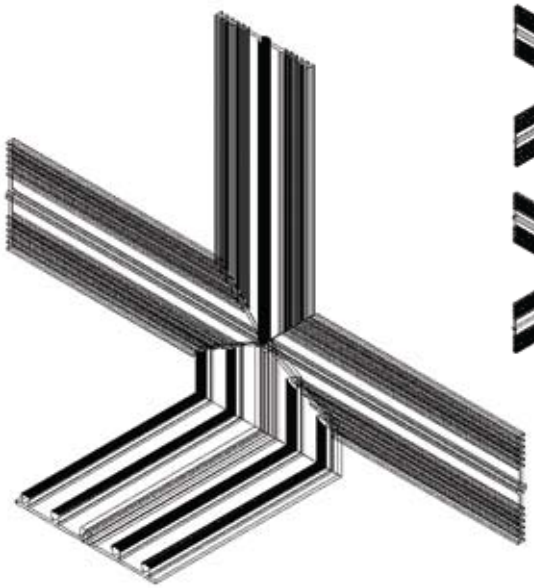


Shop Made Fittings are recognized and specified worldwide by major engineering firms. The U.S. Army Corps of Engineers also specified Shop Made Fittings in the July, 1995 revision of CEGS Section 03250. Shop Made Fittings are specified because they work. Edge welding waterstop seriously compromises the integrity of any project. Even the limited movement of concrete during the coefficient of expansion and contraction can be too much for edge welded waterstop. The edge welded waterstop lacks the proper tensile strength and does not maintain the characteristics of the parent material (bulb or rib continuity). Consequently, the waterstop often tears at the most critical junction: the change of direction. Since all waterstops are designed to act as a continuous, fluid-tight diaphragm which fluids



(generally water) traverse, the structure that uses edge welded waterstop will naturally leak, as fluids migrate to any tears in the weld and pass through to the other side of the joint.

Structures that use Shop Made Fittings will significantly reduce these waterstop failures. The tensile strength of the weld will be at least 80% of the parent material. Continuity of the bulbs and ribs shall be maintained across the weld. In other words, the waterstop will perform as intended and last the life of the structure.



Trust Your Critical Water Projects to Earth Shield® — NSF Standard 61 Certified, EPA Compliant Waterstop

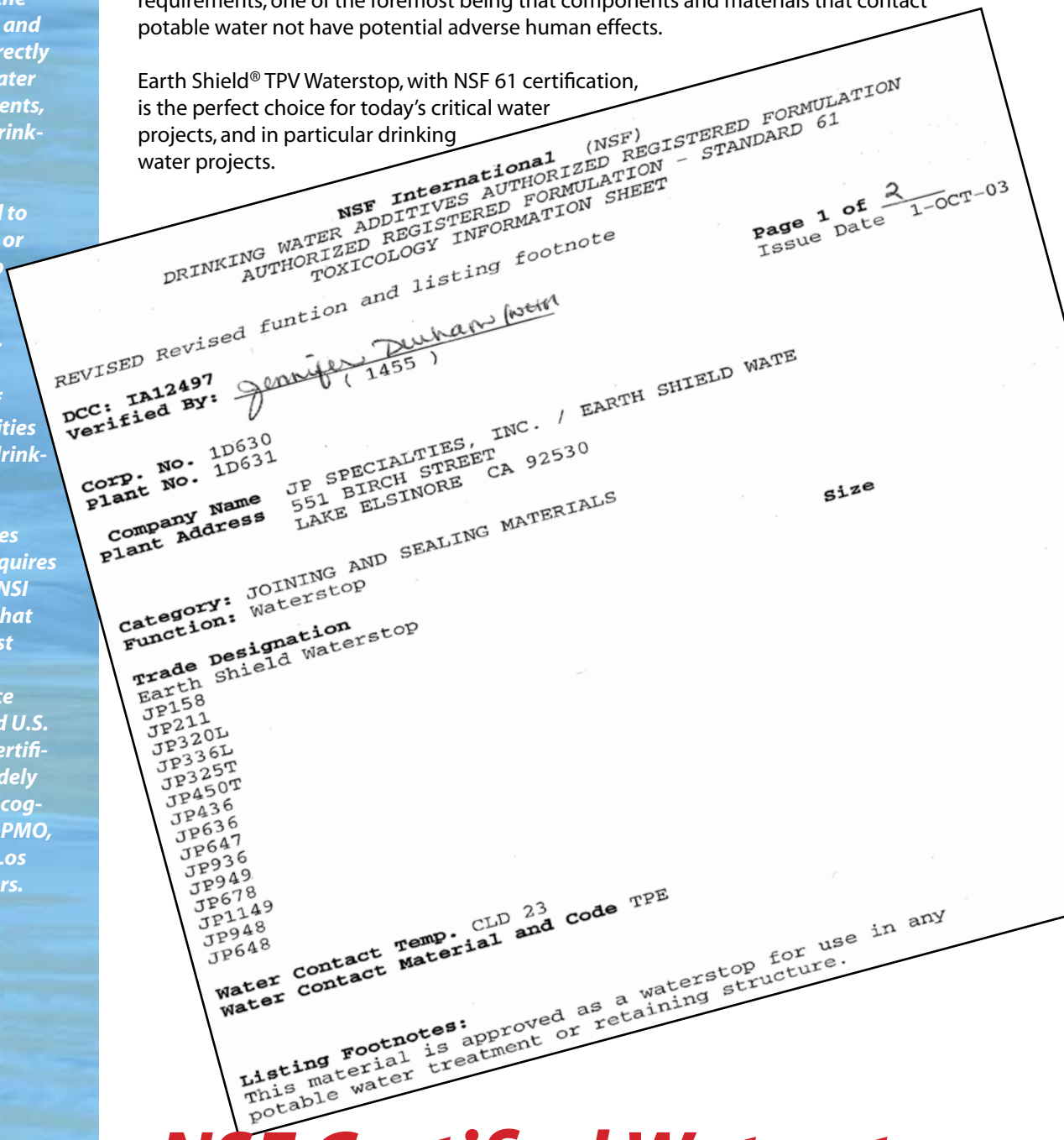
Water is arguably the most valuable resource in the world. Today's water treatment, distribution, and storage projects are under ever-increasing layers of regulations and requirements, one of the foremost being that components and materials that contact potable water not have potential adverse human effects.

Earth Shield® TPV Waterstop, with NSF 61 certification, is the perfect choice for today's critical water projects, and in particular drinking water projects.

NSF/ANSI Standard 61 was developed to establish minimum requirements for the chemical contaminants and impurities that are indirectly imparted to drinking water from products, components, and materials used in drinking water systems.

Standard 61 is intended to cover specific materials or products that come into contact with drinking water, drinking water treatment chemicals, or both. The focus of Standard 61 is evaluation of contaminants or impurities imparted indirectly to drinking water.

In the U.S., 47 of 50 states have legislation that requires compliance with NSF/ANSI Standard 61. Products that are NSF Certified against NSF/ANSI Standard 61 demonstrate compliance with both Canadian and U.S. Plumbing Codes. NSF Certification and Testing is widely accepted. NSF data is recognized by ASSE, BOCA, IAPMO, ICBO-ES, SBCCI, City of Los Angeles and many others.



NSF International (NSF)
DRINKING WATER ADDITIVES AUTHORIZED REGISTERED FORMULATION
AUTHORIZED REGISTERED FORMULATION - STANDARD 61
TOXICOLOGY INFORMATION SHEET

Page 1 of 2
Issue Date 1-OCT-03

REVISED Revised funtion and listing footnote

DCC: IA12497
Verified By: Jennifer Durham (NSF) (1455)

Corp. No. 1D630
Plant No. 1D631

Company Name JP SPECIALTIES, INC. / EARTH SHIELD WATE
Plant Address 551 BIRCH STREET
LAKE ELSINORE CA 92530

Size

Category: JOINING AND SEALING MATERIALS
Function: Waterstop

Trade Designation
Earth Shield Waterstop
JP158
JP211
JP320L
JP336L
JP325T
JP450T
JP436
JP636
JP647
JP936
JP949
JP678
JP1149
JP948
JP648

Water Contact Temp. CLD 23
Water Contact Material and Code TPE

Listing Footnotes:
This material is approved as a waterstop for use in any potable water treatment or retaining structure.

NSF Certified Waterstop

Independently Tested by NSF International

Type 20 & 23

Effective & Economical Hydrophilic

High-Quality Hydrophilic Waterstop for Concrete Construction

Earth Shield® Type 20 & Type 23 Hydrophilic Butyl Rubber Waterstops are designed to swell when exposed to water, yet maintain a solid structural integrity that will not deteriorate due to uncontrolled expansion, unlike many of the traditional, clay-based waterstops currently on the market. This swelling ability prevents the passage of water through concrete construction joints.

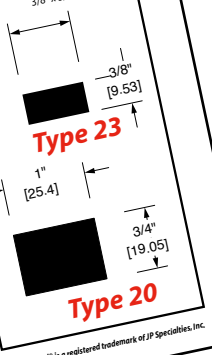
Type 20 & 23 waterstops are fast, easy, and economical to install. Simply apply Earth Shield Primer to the existing concrete, firmly press the waterstop to the primed surface, and place your second pour of concrete. No splitting of forms or difficult field welding is necessary to achieve a watertight seal.

Earth Shield Type 20 & 23 Hydrophilic Butyl Rubber Waterstops are ideal for:

- Non-moving Joints
- Pipe Penetrations
- Slabs & Walls
- Utility Vaults
- Manholes
- Cast-in-Place Applications

Typical Physical Properties

Specific Gravity, 77°F ASTM D71	1.35
Hydrocarbon content ASTM D297	47%
Volatile Matter ASTM D6	1%
Penetration, Cone 77°F 150 gm. 5 sec. ASTM D217	40 mm
Service Temp., °F	-30° to 180°F
Color	Black
Type 20 Packaging	6 rolls per carton 100 lft. per carton 3/4" x 1" x 16'8"
Type 23 Packaging	8 rolls per carton 200 lft. per carton 3/8" x 3/4" x 25'



Installation Instructions

1. Brush and remove loose dirt and particles from the surface.
2. Brush one coat of Type 20 Primer Adhesive on to the clean, concrete surface.Type 20 Primer Adhesive is available in one gallon cans.
3. Allow primer to cure (per directions on can).
4. Press Type 20 firmly onto the primed surface.
5. Overlap ends (1" minimum), and join with a kneading action, press ends together until there is no separation or air pockets.
6. Remove separation paper.
7. You are now ready for your second pour.

Suggested Short Form Guide Specification

Waterstop indicated in drawings and specifications for construction joints to be **Earth Shield® Hydrophilic Type 20 Waterstop** as manufactured by **JP Specialties, Inc.** — 551 Birch Street, Lake Elsinore, CA 92530 — Phone 800-821-3859; International 951-674-6869; Fax 951-674-1315; Web www.jpspecialties.com ; E-mail jpspec@jpspecialties.com

1. Size: 3/4" x 1" x 16'-8" continuous.
2. Required hydrostatic pressure resistance: 100 psi.
3. No equals or substitutions allowed.

www.jpspecialties.com/jpproduct.html

JP Specialties, Inc.
P.O. Box 1507, Lake Elsinore, CA 92531
Phone: 800-821-3859; Fax: 951-674-1315
E-mail: jpspec@jpspecialties.com
Web: www.jpspecialties.com

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).

Waterstops 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

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

Meets or exceeds Black & Veatch specification requirements

Carbon Steel Waterstop

Earth Shield® Carbon Steel Waterstop — Part No. JP550 (left); Part No. JP550B (right).

Earth Shield® Carbon Steel Waterstop is available in a variety of grades, gauges, widths, and finishes. All waterstop is made to order to the required ASTM or specification requirements.

Reference ASTM Specifications — Hot-Rolled Carbon

ASTM A569 — Standard Specification for Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled sheet and Strip Commercial.

ASTM A505 — Standard Specification for Steel, Sheet and Strip, Alloy, Hot-Rolled and Cold-Rolled, General Requirements For.

ASTM A506 — Standard Specification for Steel, Sheet and Strip, Alloy, Hot-Rolled and Cold-Rolled, Regular Quality and Structural Quality.

ASTM A570 — Standard Specification for Steel, Sheet and Strip, Alloy, Carbon, Hot-Rolled (Replaced by ASTM A1011).

ASTM A1011 — (Replaces ASTM A570) Standard Specification for Steel, sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low Alloy with Improved Formability.

ASTM A36 — Standard Specification for Carbon Structural Steel.

Reference ASTM Specifications — Cold-Rolled Carbon

ASTM A109 — Standard Specification for Steel, Strip, Carbon, Cold-Rolled.

ASTM A366 — Standard Specification for Commercial Steel (CS) Sheet, Carbon (.15 Maximum, Percent) Cold-Rolled.

ASTM A505 — Standard Specification for Steel, Sheet and Strip, Alloy, Hot-Rolled and Cold-Rolled, General Requirements For.

ASTM A506 — Standard Specification for Steel, Sheet and Strip, Alloy, Hot-Rolled and Cold-Rolled, Regular Quality and Structural Quality. www.jpspecialties.com/sswaterstop.html

JP Specialties, Inc.
P.O. Box 1507, Lake Elsinore, CA 92531
Phone: 800-821-3859; Fax: 951-674-1315
E-mail: jpspec@jpspecialties.com
Web: www.jpspecialties.com

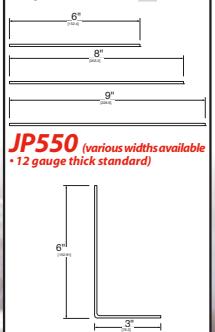
Distributed by:

Typical Physical Properties

Earth Shield® CS Waterstop is certified for use in Black & Veatch Specifications.

Earth Shield® CS Waterstop is certified for use in U.S. Army Corps of Engineers Guide Specification for Military Construction CEGS 03250 Section 2.4.2 Rigid Metal Waterstops.

Width	Various
Length	10 lft
Yield Strength	49,741 psi
Tensile Strength	70,187 psi
Elongation	30%



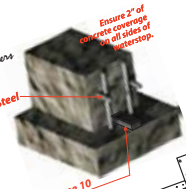
JP550 *(various widths available • 12 gauge thick standard)*

JP550B *(various widths available • 12 gauge thick standard)*

www.jpspecialties.com/sswaterstop.html

Type 10

High-Quality Mastic Sealant Waterstop for Concrete Construction Joints



Earth Shield® Type 10 is a high-quality, self-sealing mastic waterstop which prevents water from penetrating non-moving joints in concrete construction.

Type 10's ease of installation makes it the ideal choice for a variety of applications, including:

- Concrete Vaults
- Utility Vaults
- Septic Tanks
- Burial Vaults
- Retaining Walls
- Tunnels
- Storage Tanks
- Box Culverts
- Pipe Penetrations
- Slabs-on-grade
- Foundations
- Cast-in-Place Applications

The Type 10 Advantage

- Provides permanently flexible watertight joints.
- Quick and easy to install. Does not require skilled labor.
- Excellent adhesion to clean, dry surfaces.
- Sealed joints will not shrink, harden or oxidize upon aging.
- Rugged service temperature: -30°F to 200°F (-34°C to 93°C).

Installation Instructions

1. Brush and remove loose dirt and particles from the surface.
2. Brush one coat of Type 10 Primer Adhesive on to the clean, concrete surface. Type 10 Primer Adhesive is available in one gallon cans.
3. Allow primer to cure (per directions on can).
4. Press Type 10 firmly onto the primed surface.
5. Overlap ends (1" minimum), and join with a kneading action, press ends together until there is no separation or air pockets.
6. Remove separation paper.
7. You are now ready for your second pour.

Suggested Short Form Guide Specification

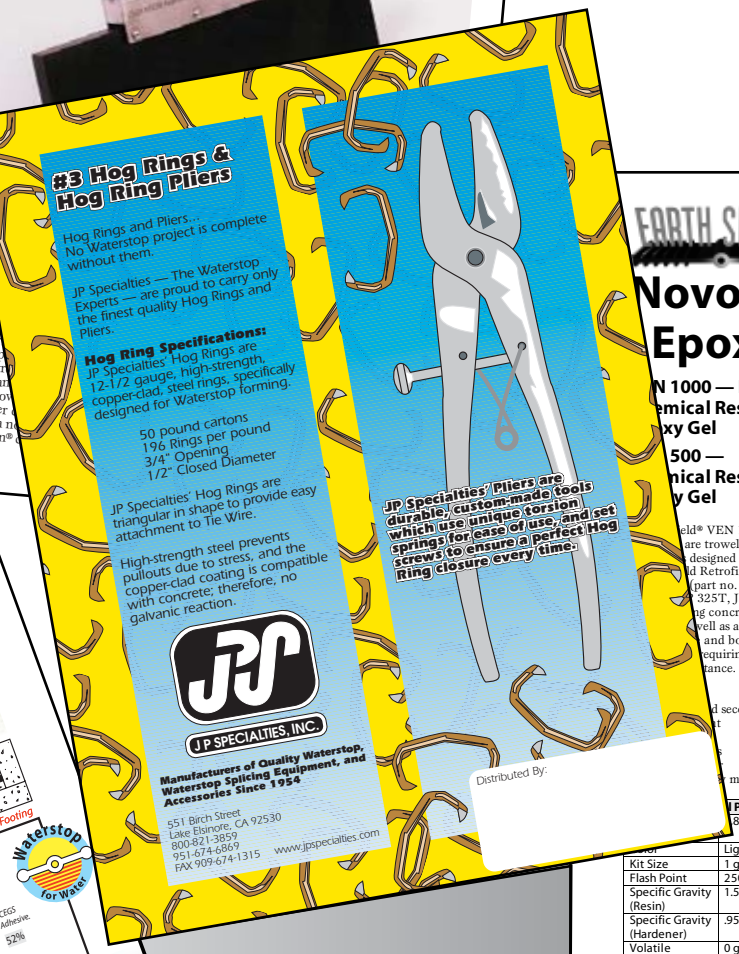
Waterstop indicated in drawings and specifications for construction joints to be **Earth Shield® Type 10 Waterstop** as manufactured by **JP Specialties, Inc.** — 551 Birch Street, Lake Elsinore, CA 92530 — Phone 800-821-3859; International 951-674-6869; Fax 951-674-1315; Web www.jpspecialties.com ; E-mail jpspec@jpspecialties.com

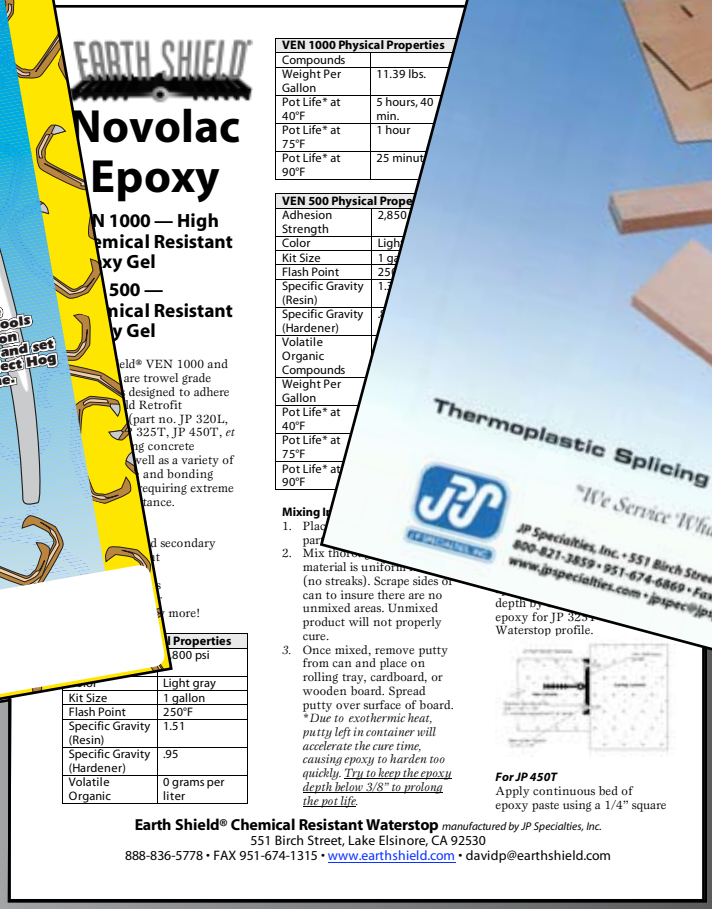
1. Size: 3/4" x 1" x 16'-8" continuous.
2. Required hydrostatic pressure resistance: 20 psi.
3. Required certification to Federal Spec. SS-S-210A.
4. No equals or substitutions allowed.

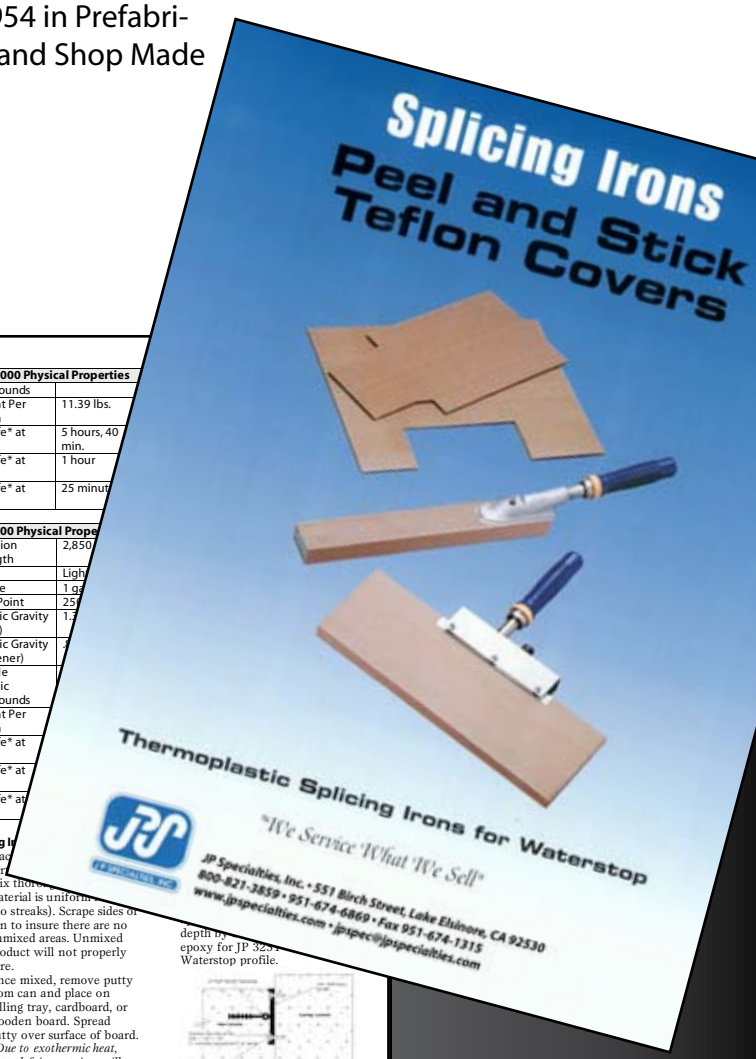
www.jpspecialties.com/jpproduct.html

JP Specialties, Inc.
P.O. Box 1507, Lake Elsinore, CA 92531
Phone: 800-821-3859; Fax: 951-674-1315
E-mail: jpspec@jpspecialties.com
Web: www.jpspecialties.com

JP Specialties, Inc. manufactures a wide range of high-quality waterstop and waterstop accessories for the concrete construction industry. Our Earth Shield® line of chemical resistant waterstop is designed to offer solutions for today's unique regulatory compliance needs. Our waterstop welding equipment is used industry-wide as the standard for quality, high tensile strength waterstop welds. Knowing that a waterstop will only offer a fluid-tight barrier if change of directions are done properly, JP Specialties has been a leader since 1954 in Prefabricated Waterstop Modules and Shop Made Fittings.







Additional JP Specialties Products

www.earthshield.com/Waterstop_for_Concrete_Joints/product.html

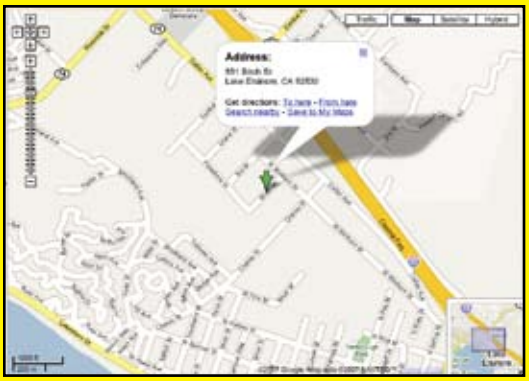
Availability

National and International Warehouses

Earth Shield® Chemical Resistant Waterstop is readily available from a variety of sources:

- **Preferred Regional Stocking Partners** — We are partnered with some of the very best Concrete Accessories Distributors in the world. All our preferred partners have large stocking inventories and are factory trained to provide the utmost in on-site assistance.
- **Distributor Sales** — Earth Shield® can be special ordered from many distributor sales channels throughout the world.
- **Factory Direct** — Earth Shield® may be contacted directly for project quotation and product purchase (call 888-836-5778).

Visit Earth Shield® on the Web at www.earthshield.com for all the latest information



JP Specialties, Inc. is conveniently located between Los Angeles and San Diego in Lake Elsinore, California. We have stocking Preferred Distributor Partners strategically located throughout the nation and the world.

Distributed by:

Earth Shield® Thermoplastic Vulcanizate (TPV / TPER) Waterstop Limited Warranty

JP Specialties, Inc. warrants to the Buyer that this product is new and will be free from defects and will perform as represented in writing subject to the two (2) following conditions: First, the application of the product and the concrete construction practices used in the application are in accordance with JP Specialties, Inc. recommendations; and, Second, the Buyer has selected the proper product for the specific application required.

Any information supplied in good faith by JP Specialties, Inc. with respect to its products is believed to be correct. JP Specialties, Inc. Makes no representation or warranties, expressed or implied, as to the accuracy or completeness of such information.

The exclusive remedies of the Buyer and the limit of the liability of JP Specialties, Inc. from any and all losses or damages resulting from the use of this product shall be either full refund of the purchase price to the Buyer of this product or the replacement of the quantity of product purchased by the Buyer at the discretion of JP Specialties, Inc.

All supplied testing data has been performed by independent testing laboratories. JP Specialties, Inc. has performed no tests.

Earth Shield® Chemical Resistant Waterstop
P.O. Box 1507, Lake Elsinore, CA 92531
Phone: 888-836-5778; International: 951-674-6869
Fax: 951-674-1315
www.earthshield.com
J P SPECIALTIES, INC.

Publication Date October, 2009 • Earth Shield® and CAPwrap® are registered trademarks of JP Specialties, Inc.