

BoMetals, inc.®

concrete and masonry accessories

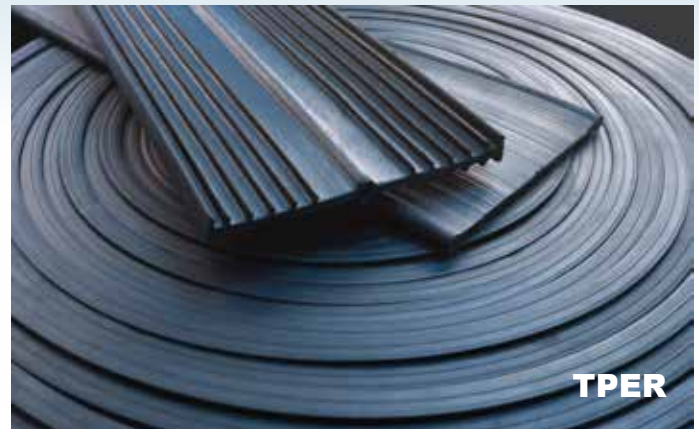
The Source for Waterstops for Every Application



...No matter the need, and no matter if it is all-new construction or connecting with existing construction.



Our Waterstop Solutions for Every Application



We have been providing Waterstop products since 1992.

- BoMetals PVC products are made of 100% virgin material and meet or exceed Corp Engineer Standard CRD-C572-74. Made in our Plant in Carrollton, GA, our PVC waterstop comes in various profiles and sizes to fit the needed requirements.
- We also offer a specially formulated Thermoplastic Vulcanizate, (TPER) a fully cross-linked compound version as a chemical resistant solution. The TPER material provides the needed resistance to petro-chemical, solvents, aqueous acids, and chemicals listed as hazardous by the EPA.
- Our strip-applied product, Hydrostrip™ waterstops are made from different materials including Butyl Rubber, Chloroprene Rubber, Fuel Resistant materials and Chemical Resistant materials. These are applied to joints after concrete has been placed to help contain liquid.

PVC WATERSTOPS

TYPES OF CONCRETE JOINTS

Expansion (Isolation) Joint

A joint that separates the slab structurally from other building elements such as walls, columns, foundations, drain pipes, to accommodate differential horizontal and vertical movement.

Contraction (Control) Joint

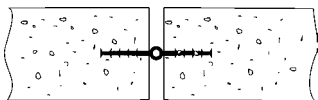
A formed, sawed or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure.

Construction Joint

A joint placed in concrete where construction operations are concluded for the day.

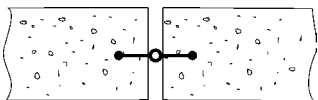
—Reprinted with permission, American Concrete Institution, CCS-1, Slabs on Grade, Mary K. Hurd, Editor.

WATERSTOPS FOR MOVING JOINTS



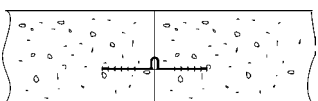
Ribbed Center Bulb

Used in expansion joints where normal movement between members is anticipated. **Also available in split shapes.**



Dumbbell with Center Bulb

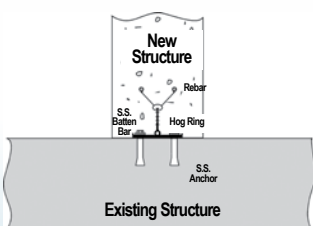
Used in expansion joints where longitudinal and transverse movement is anticipated.



Tear Web

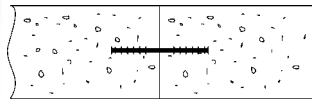
Used in expansion joints where large joint movements are expected.

RETROFIT APPLICATIONS



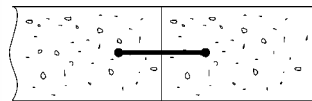
Used to provide a watertight seal when attaching a new construction project to an existing one.

WATERSTOPS FOR NON OR LIMITED MOVEMENT JOINTS



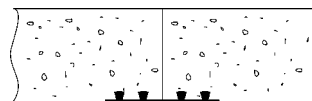
Flat Ribbed

Used in construction joints where little or no movement is anticipated and where high bond strength is desired.



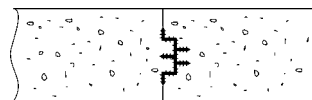
Dumbbell

Used in construction joints where little or no movement is anticipated. **Also available in split shapes.**



Base Seal

Used in grade construction between concrete walls and slabs, in backfilled retaining walls and in keyed construction joints in walls and slabs.



Multi Rib

Used in construction joints in vertical applications where key action is desired.

TYPICAL PROPERTIES OF PVC WATERSTOPS MEET OR EXCEED CRD-C 572-74, 100% VIRGIN RESIN

Typical Properties	Minimum Value	ASTM
Water Absorption, %	0.15 max	D-570
Tear Resistance, lb/in (kg/cm)	300 (53.5)	D-624
Specific Gravity, (+/-0.05)	1.38	D-792
Hardness, Shore A (+/-5, 10 sec. delay)	80	D-2240
Tensile, psi (kg/cm ²)	2000 (140.6)	D-638, Type IV
Elongation, %	350	D-638, Type IV
Low Temperature Brittleness, °F (°C)	-35(-37) Passed	D-746
Stiffness in Flexure, psi (kg/cm ²)	600 (42.1)	D-747
Accelerated Extraction, CRD-C 572		
Tensile, psi (kg/cm ²)	1600 (112.4)	D-638, Type IV
Elongation, %	300	D-638, Type IV
Effect of Alkali, CRD-C 572		
Weight Change, %	-0/+0.25	-----
Change in Hardness, %	+/-5	D-2240

IMPORTANT: The technical data herein is believed to be accurate. It is offered for your consideration, investigation and verification. All testing and test data has been prepared by independent laboratories. NO WARRANTY, EXPRESS OR IMPLIED, IS MADE as to the accuracy or completeness of the technical data herein and the use thereof for any particular purpose.

RIBBED CENTER BULB

Catalog Number	Head Pressure	Lbs./ LF	Profile
RCB-4316	65'	.40	
RCB-4316CA	65'	.50	
RCB-4316LB	65'	.74	
RCB-4316NT	65'	.60	
RCB-6316	100'	.73	
RCB-6316A	100'	.92	
RCB-6316NT	100'	.86	
RCB-6316T	100'	.68	
RCB-612	150'	1.90	
RCB-614	100'	.98	
RCB-638	125'	1.16	
RCB-638BR	125'	1.19	

Catalog Number	Head Pressure	Lbs./ LF	Profile
RCB-638LB	125'	1.63	
RCB-638NT	125'	1.55	
RCB-912	200'	2.42	
RCB-9316	100'	1.20	
RCB-938	175'	1.76	
RCB-938BR	175'	2.65	
RCB-938LB	175'	2.25	
RCB-938NT	175'	2.45	
RCB-938VLB	150'	2.73	
RCB-1212	225'	4.32	
RCB-1212T	225'	3.60	
RCB-12316	150'	1.56	

FLAT RIBBED

Catalog Number	Head Pressure	Lbs./ LF	Profile
FR-4316	65'	.45	
FR-6316	75'	.81	
FR-638	125'	1.50	
FR-638RT	125'	1.70	
FR-638T	125'	1.30	
FR-9316	100'	1.20	
FR-938	175'	2.37	
FR-938T	175'	2.07	

SPLIT RIBBED CENTER BULB

Catalog Number	Head Pressure	Lbs./ LF	Profile
SR-4316	65'	.52	
SR-6316	100'	.75	
SR-638	125'	1.54	
SR-938	150'	2.04	
SR-1212	200'	3.18	

DUMBHELL

Catalog Number	Head Pressure	Lbs./ LF	Profile
DB-4316	65'	.49	
DB-6316	75'	.71	
DB-6316LB	75'	.93	
DB-614	100'	1.11	
DB-638	125'	1.59	
DB-9316	100'	1.17	
DB-938	150'	2.17	
DB-938LB	150'	2.55	
DB-1238	200'	2.99	

SPLIT DUMBELL

Catalog Number	Head Pressure	Lbs./ LF	Profile
SD-638	125'	1.51	
SD-938	150'	2.20	

MULTI RIB

Catalog Number	Head Pressure	Lbs./ LF	Profile
MR-314	25'	.84	
MR-412	50'	1.24	

RETRO FIT

Catalog Number	Head Pressure	Lbs./ LF	Profile
RF-4316	N/A	.89	
RF-638	N/A	2.15	
RF-912	N/A	4.84	
RFL-3316	N/A	.90	

DUMBBELL WITH CENTER BULB

Catalog Number	Head Pressure	Lbs./ LF	Profile
DBCBC-614	100'	1.41	
DBCBC-638	100'	1.68	
DBCBC-938	150'	3.10	
DBCBC-938L	150'	3.70	

RETRO FIT ACCESSORIES - EPOXY, SS BARS & BOLTS

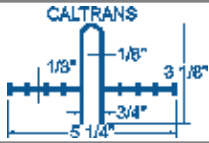


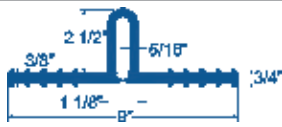


BASE SEAL

Catalog Number	Head Pressure	Lbs./ LF	Profile
BS-618	100'	.89	
BS-618CI	100'	1.07	
BS-718E	100'	1.16	
BS-72518	75'	.88	
BS-9316	100'	1.72	
BS-9532	100'	1.53	
BS-17532	N/A	2.75	
CU-912	N/A	4.53	

PVC WATERSTOPS

TEAR WEB

Catalog Number	Head Pressure	Lbs./ LF	Profile
CTW 1-2	35'	1.10	
TW-618	65'	.78	
TW-918	100'	1.00	
TW-938	150'	3.78	

WATERSTOP ACCESSORIES

FIELD SPLICING TOOLS



Dimensions: 2" x 14" x 1" (#SI-214)
4 1/2" x 14" x 3/4" (#SI-414)

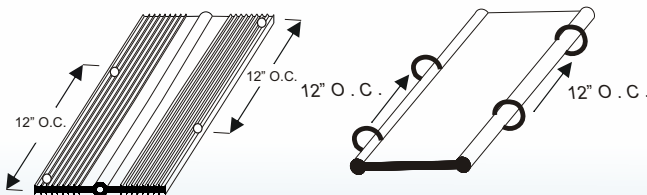


100% factory tested, adjustable temperature, heavy duty vinyl grip, teflon peel and stick cover, standard 110-120 VAC/8 Amp, 8' power cord, UL Listed.
Additional Splicing Covers available.

Splicing
Video



HOG RING OR EYELET INSTALLATION



BoMetals can install Hog Rings or Eyelets to virtually any Waterstop profile. Please call 800-862-4835 for profile specific quotes.

We are also able to supply Hog Rings direct to you for field installation.

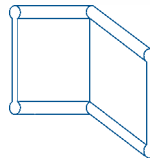
WATERSTOP ACCESSORIES

CUSTOM SPLICES

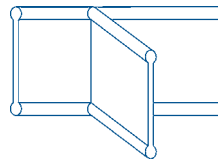
An important factor in the watertightness of any waterstop is the reliability of splices. With BoMetals fittings, you are guaranteed greater strength and efficiency with ease of field installation. The following factory made splices are available in PVC & TPER. BoMetals is also capable of manufacturing other custom splices specifically to fit your specifications.



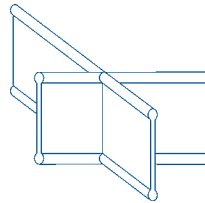
Custom Fabrication
Video



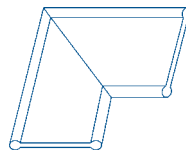
Vertical Ell



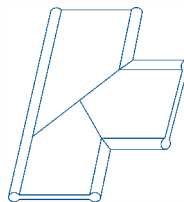
Vertical Tee



Vertical Cross



Flat Ell

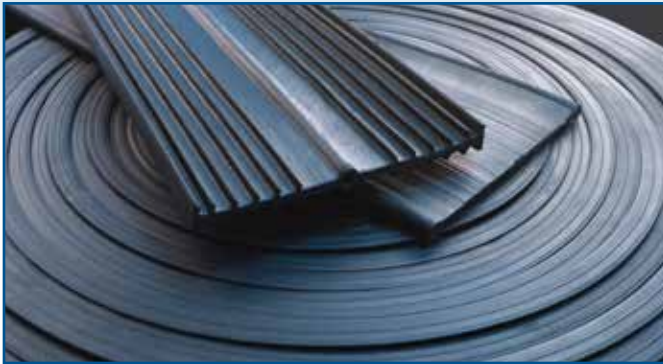


Flat Tee



Flat Cross

CHEMICAL RESISTANT WATERSTOP



TPER AVAILABLE IN EVERY PROFILE ON PAGE 3-8,11

Chemical Resistant Waterstop is available in virtually every PVC Profile. BoMetals TPER is made of a specially formulated Thermoplastic Vulcanizate which is fully cross-linked compound. TPER should be used to provide a fluid tight diaphragm in secondary and tertiary, above and below grade containment facilities. This is accomplished by offering a product for concrete expansion and construction joints that greatly expands its resistance to petro-chemical, solvents, aqueous acids, and chemicals listed as hazardous by the EPA. BoMetals many selections will allow precise waterstop design for each critical application. The physical design and the field installation adversities should be considered when specifying and designing waterstop installation.

Physical Properties of TPER Waterstop

Properties		ASTM
Hardness Shore A, ± 3	90	D-2240
Specific Gravity	0.96	D-792
Tensile Strength, psi (MPa)	2300 (15.9)	D-412 D-1171
Elongation, %	530	D-412
Brittle Point, °F (°C)	-65 (-54)	D-746
Stress @ 100% Elongation, psi (MPa)	1000 (6.9)	D-638
Ozone Resistance	Passed with no cracking at 500 ppm	

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TPER Retro Fit Accessories Epoxy, SS Bars & Bolts



Popular Chemical Resistant Profiles

TCB-4316	
TCB-4316NT	
TCB-6316	
TCB-6316NT	
TCB-638LB	 CH2M H, MWH, BLACK & VEATCH
TDB-4316	
TDB-6316	
TDB-638	
TFR-4316	
TFR-638	
TSR-6316	

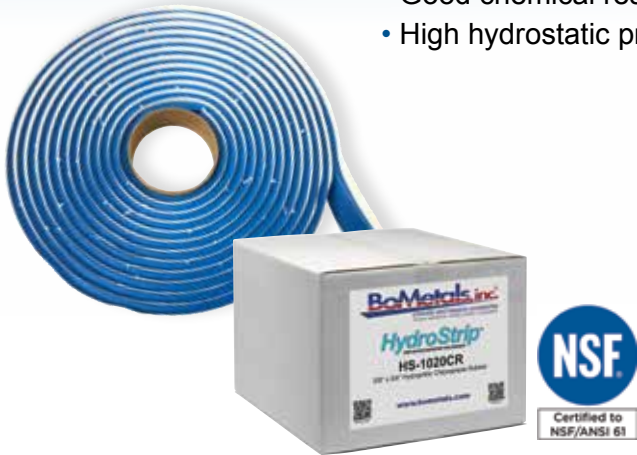
BOMETALS CAN MANUFACTURE CHEMICAL RESISTANT WATERSTOP FROM VIRTUALLY ANY PROFILE ON PAGES 4-7

HYDROPHILIC CHLOROPRENE RUBBER

- FEATURES:**
- Controlled Swell
 - Non-Bentonite
 - Good chemical resistance
 - High hydrostatic pressure

- COMMON APPLICATIONS:**
- Cast-in-place joints (100psi)
 - Standard precast concrete joints (30psi)
 - Precast tunnel segments (75psi)

- PROJECT TYPE EXAMPLES:**
- Retaining Walls
 - Storage Tanks
 - Water Treatment
 - Waste Water
 - Foundations
 - Slab on Grade



AVAILABLE DIMENSIONS:

- HS-1020CR** 3/8" x 3/4" x 25' - 8 rolls/case (200ft)
- HS-0725CR** 5/16" x 1" x 25' - 6 rolls/case (150ft)

HYDROPHILIC ELASTOMERIC SEALANT

- FEATURES:**
- Swells upon contact with water
 - Single component application
 - Excellent for new construction
 - Suitable for repair application
 - Works well with precast
 - Swells up to 100% in 7 days
 - Resists hydrostatic pressure to 60psi
 - Adhesive and weld properties



HS-201P-20 (20.2oz. pack)

BUTYL RUBBER HYDROPHILIC

- FEATURES:**
- Provides watertight seal in cold joints
 - Controlled swell on contact with water
 - Penetrates into poorly consolidated surfaces

- COMMON APPLICATIONS:**
- New or existing non-moving construction joints
 - Through wall penetrations
 - Depths of up to 100 feet

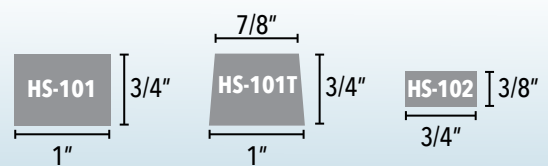
PROJECT TYPE EXAMPLES:

- Water treatment facilities
- Waste water treatment facilities
- Tunnels and vaults
- Manholes, culverts, slabs



AVAILABLE DIMENSIONS:

- HS-101** 3/4" x 1" x 16.8' - 6 rolls/case (100ft)
- HS-101T** 1" Trapezoid x 21' - 6 rolls/case (126ft)
- HS-102** 3/8" x 3/4" x 14.5' - 8 rolls/case (116ft)



BUTYL RUBBER NON HYDROPHILIC



- FEATURES:**
- Self-sealing plastic adhesive compound
 - Bonds to cured concrete
 - Fuses with fresh concrete while curing for water tight seal
 - Unaffected by rain, snow or existing ground water



PROJECT TYPE EXAMPLES:

- Cold joints in highway tunnels
- Parking garages
- Office buildings
- Hospitals
- Sports complexes
- Enclosed potable reservoirs
- Wastewater plants

AVAILABLE DIMENSIONS:

HS-302NS 1-1/4" x 1" x 36" - (75ft box)

FUEL RESISTANT



- FEATURES:**
- Non Swell
 - Permanently flexible maintaining watertight joints
 - Will not harden or shrink over time
 - Installation is possible between 20° to 120° F

COMMON APPLICATIONS:

- Suitable for applications with possible exposure to: Gasoline, Jet A Fuel, JP-4 Fuel, JP-8 Fuel, Kerosene, Methyl Ethyl Ketone, Runway De-Icers, Diesel

PROJECT TYPE EXAMPLES:

- Airports
- Transportation facilities
- Fuel storage

AVAILABLE DIMENSIONS:

HS-312FR 7/8" x 7/8" x 14.5' - 8 rolls/case (116ft)

PRIMER ADHESIVES

Use with Mastic Non-Hydrophilic applications. Brush on application. Creates a bond and adhesion between concrete and preformed sealant.



SOLVENT BASED

HS-311PS
(4) 1 gal. pails/case

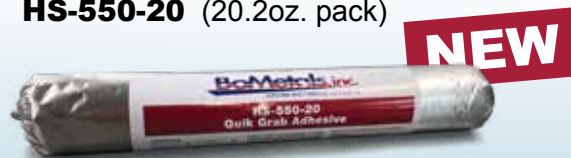
WATER BASED

HS-300PW
(4) 1 gal. pails/case

QUIK GRAB ADHESIVE

- Perfect for installing strip applied waterstops.
- Adheres well to concrete, metal, fiberglass, plastic, PVC, glass, aluminum & wood.
- Tack free skin forms in 40 minutes, full cure takes place in 24 to 48 hours
- 100% Solids, will not shrink

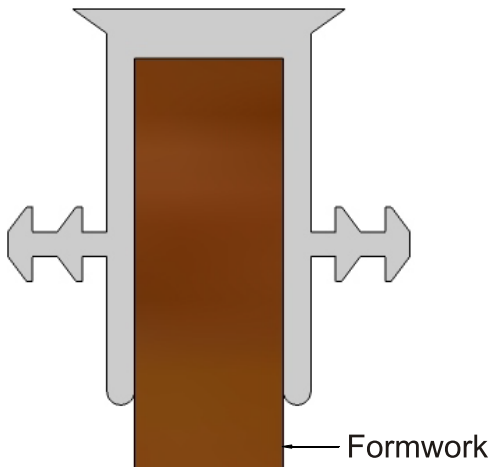
HS-550-20 (20.2oz. pack)



B-SEAL PAVING CAP SEAL

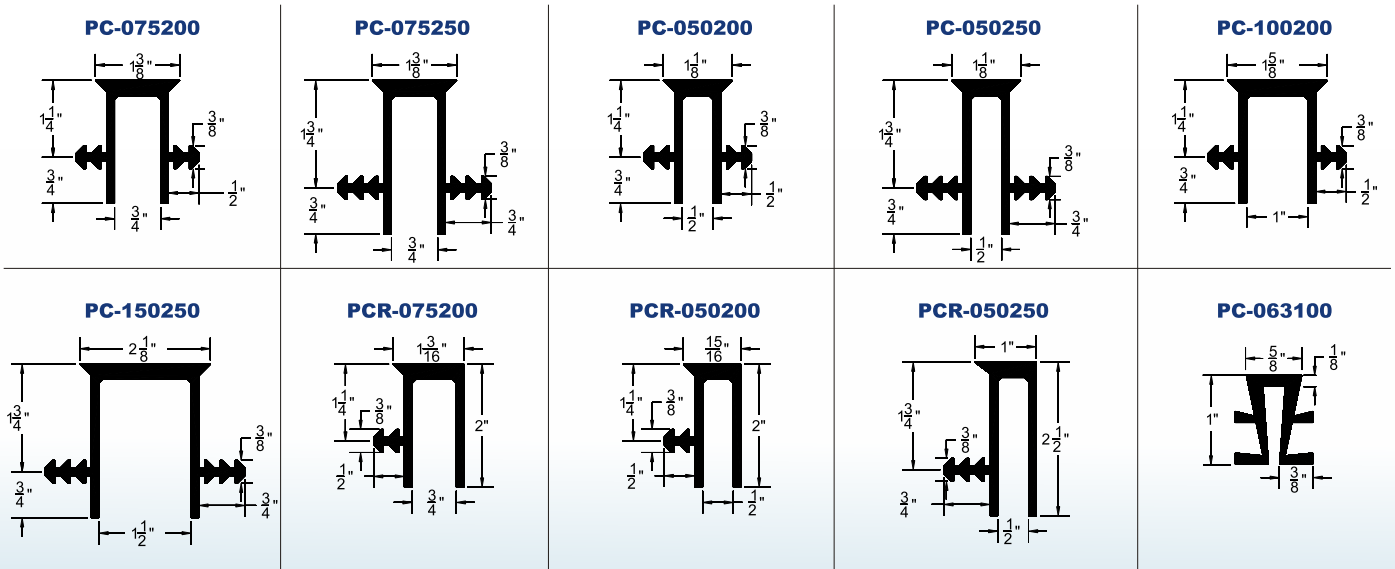
B-SEAL is one of the most advanced Paving Cap Seal System in the industry. BoMetals uses specially formulated PVC to provide a durable sealing system for a maintenance free joint.

- Same continuous look throughout joint
- Protects against debris
- Can be used in the screeding process
- Also available in TPER



Typical Properties	Nominal Value	ASTM Method
Tensile Strength, psi	2500 min	D-412
Elongation, %	300 min	D-412
Hardness Shore A, ± 3	85	D-2240
Oil Swell, Change in Volume/Weight ASRM #3 Oil, 70 hrs. @212F	$\pm 10\%$ by volume max. $\pm 15\%$ by weight max.	D-471
Abrasion Resistance 10,500 cycles, 1000 grams load	Material Loss - 0.4 gms. max.	D-3884
Ozone Resistance, 20% Strain 300 pphm, 70 hrs. @ 104F	No Cracking	D518
Results After Heat Aging	Tensile Strength Retained: 90% min. Elongation Retained: 90% min. Hardness Changes: 3%	D-573

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Fradiflex® – Waterstop for Working Joints

NEW



All concrete structures in contact with the ground must be sealed against ground moisture, seepage water or pressurized water. Our Fradiflex® metal waterstop system meets all requirements for the secure sealing of water-impermeable structures. The flexible special coating bonds with the concrete, creating an adhesive barrier seal that prevents water from circulating. The system can be used for the reliable sealing of construction and predetermined crack joints in on site concrete construction and with element walls.



ADVANTAGES

- More safety due to fewer splices (roll)
- Simple position protection due to fixing angle
- Tested up to 165ft water pressure (according to ETA and abP 2.0 bar)
- No welding necessary at the joints
- Fast installation thanks to two fixing points (crack inducing elements)
- Stable crack inducing elements (secure standing and position)
- Overlap to splice
- Bend for intersections

Fradiflex® is a registered trademark of MAX FRANK Group. Pictures: © MAX FRANK Group



Since 1989 we have been committed to offering the best products available to the concrete construction industry. BoMetals offers this comprehensive line of WaterstopSystems and leads the industry as the nation's top manufacturer of keyway joint systems.

We also offer multiple solutions for load transfer. When it comes to dowel systems no other manufacturer offers a more comprehensive line. Our round dowel system includes the QuicLoad™ and QuicDowel™ in multiple sizes.



The QuicDiamond™ dowel plate system also includes our QuicDiamond™ Edge. All of our products are available through our national network of distributors and warehouses.

BoMetals, inc., 141 Hammond St., Carrollton, GA 30117
1.800.862.4835 | www.bometals.com