

# LEVAJOINT WATERSTOP

## CENTRALLY & EXTERNALLY PLACED PVC WATERSTOP

**MODEL**  
**PLAIN WEB**  
**CENTER BULB**

**CENTRALLY PLACED**  
PW  
CB

**EXTERNALLY PLACED**  
EPW  
ECB

**LEVAJOINT** Waterstop is a specially formulated polyvinyl chloride (PVC) compound manufactured from virgin materials that fulfill all properties desirable for a waterstop.

The material is tough, flexible, resilient, chemically inert, is not affected by weathering, low temperatures, or constant immersion in water. It will withstand rough treatment during installation, yet, is relatively easy to install and splice.

**LEVAJOINT** Waterstop is unaffected by concrete additives and most water solutions of organic chemicals.

### USES

**LEVAJOINT** Waterstop is designed for use in any concrete structure which contains joints and is subjected to a hydrostatic load on one face of the structure.

**LEVAJOINT** Waterstop prevents water movement through concrete joints in water reservoirs, locks, canals, sewage treatment plants, bridges, stadiums,

Basements, floor slabs, parking garages and similar structures.

COLOR: natural white, blue, or any other color upon request.

### CENTRALLY PLACED LEVAJOINT WATERSTOPS

The centrally placed waterstop concept gives a guarantee against water leaks across all joints in concrete structures by following the exact shape of adjacent concrete components. **LEVAJOINT** centrally placed waterstops are mainly suitable for use in water retaining and water excluding structures, having the capabilities of holding out against water pressure from both internal and external face.

Centrally placed **LEVAJOINT** Waterstops are available in 2 types:

#### PLAIN WEB



Plain Web PVC LEVAJOINT  
Waterstops for use in  
Construction & Contraction joints

#### CENTRE BULB



Center Bulb PVC LEVAJOINT  
Waterstops for use in  
Contraction & Expansion joints

### EXTERNALLY PLACED WATERSTOPS

The externally placed waterstop concept is designed for use in basements, foundations, floor slabs, parking, and garages constructions in both vertical and horizontal joints.

As the centrally placed **Levajoint** Waterstops, Externally placed Waterstops comprise a nailing outside rim for safe fixing to formwork (mould).

EXTERNALLY PLACED WATERSTOPS are available in two types:



External Plain Web LEVAJOINT  
Waterstops for use in construction and  
Construction & Contraction joints



External Center Bulb LEVAJOINT  
Waterstops for use in  
Expansion & Contraction joints

## WHICH WATERSTOP FOR WHICH PURPOSE?

**LEVAJOINT** Centrally and Externally placed Waterstops are designed for use in the majority of building situations, where waterstops are required to be resistant to concrete additives, and most water solutions of organic chemicals.

**LEVAJOINT** Waterstops have proved their technical advantages and resistance to long term effects over many years.

**LEVAJOINT** Waterstops comply with the technical data given hereafter.

## CENTRALLY PLACED WATERSTOPS

They are specially designed to prevent the passage of water through the joint from either face, because of their location mid way in the slab or wall thickness across the joints in the concrete structure.

They are also specifically designed for water retaining structures, for walls and slabs where a difference of pressure may occur such as "reservoir walls ".

They equally suit for joints in suspended slabs, ground floor slabs, vertical and lift joints.

## EXTERNALLY PLACED WATERSTOPS

Their main property is to be easy to install in basement and foundation construction in order to be firmly supported against back pressure such as in "water excluding" structures.

## CHOICE OF WATERSTOP'S SIZE

In order to choose the appropriate width of **LEVAJOINT** Waterstop, concrete thickness, position of reinforcement and aggregate size and plasticizers uses are concerned. It is essential that concrete is properly englobing it.

As a general rule, the concrete's thickness should be equal or bigger than the **LEVAJOINT** Centrally fixed waterstop's width.

For concrete slabs having a thickness of less than 250 mm, a smaller section similar to the slab thickness will be more adequate.

## TECHNICAL DATA

**LEVAJOINT** Waterstop is unaffected by alkalis, acids, oxidation, sewerage and most water solutions of organic chemicals.

It is extremely resistant to abrasion, corrosion, and aging.

All technical data are subject to + or - 5% fluctuations.

We can supply any form of external or internal use waterstops according to customer's request.

PROPERTY	STANDARDS & NORMS	NOMINAL VALUES
SPECIFIC GRAVITY	ISO 2781	1.37
WATER ABSORPTION	BS 2782 / 502A	
TENSILE STRENGTH	ASTM D412-87 METHOD A	2318 PSI
ULTIMATE ELONGATION	ASTM D412-87 A	285%
HARDNESS SHORE A/10		72 ± 3
STIFFNESS-IN FLEXTURE		920 PSI
TEAR RESISTANCE	ASTM D624-86 METHOD A	558 LB / INCH
MODULUS OF ELASTICITY		800 PSI
LOW TEMPERATURE BRITTLENESS	ASTM D746-79 AT - 26°C	PASSED
COLD BEND ¼" MANDREL AT - 10°C		PASSED
LOW TEMPERATURE FLEXIBILITY AT - 20°C		PASSED
LOW TEMPERATURE IMPACT AT - 20°C		PASSED
24 HOURS		0.082%
48 HOURS		0.320%

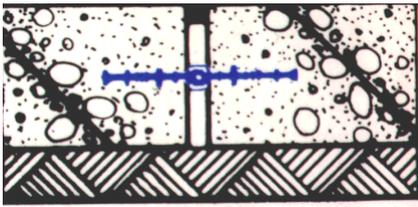
## SPLICING

**LEVAJOINT** PVC Waterstop may be butt-spliced on the job, with an electrical splicing iron. There is no need for skilled labor to do it. Crimping, shaping, brazing or vulcanizing is not necessary.

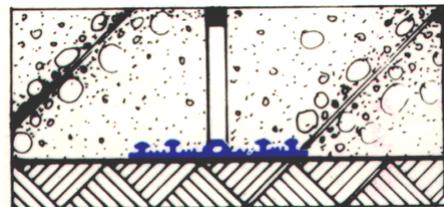
The following figures illustrate the splicing method to produce strong water-tight butt weld. Elbows tees and crosses can also be produced using this method.

A splicing iron is the recommended tool for splicing PVC Waterstops . In most instances, although a hot metal plate is still usable where an electric outlet is not available. Where the number and type of welds warrant it, the use of a hot air welding gun and vinyl welding rod is recommended. *Complete **LEVAJOINT** welding kits, comprising **LEVAJIGS** and **LEVAKNIFE** are available on request.*

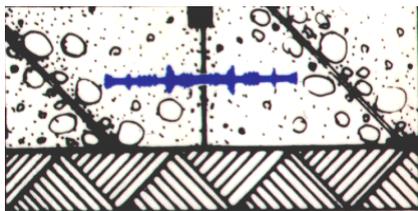
## POSITIONING



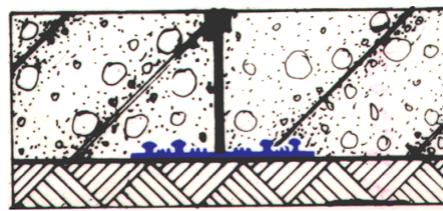
LJ-CB  
Centrally Placed LEVAJOINT



LJ-ECB  
Externally Placed LEVAJOINT

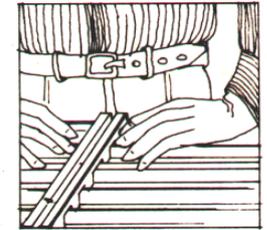
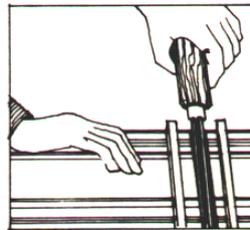
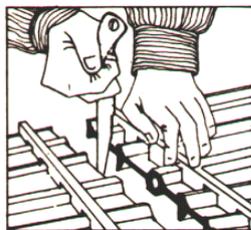
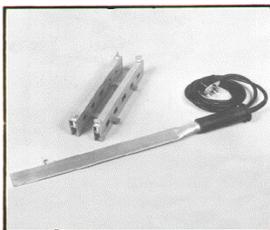


LJ-PW  
Centrally Placed LEVAJOINT



LJ-EPW  
Externally Placed LEVAJOINT

## WELDING PROCEDURE



Be sure that: The LEVAKNIFE is clean, plug it into the correct voltage (220V) electricity supply and let it warm up.

The ends of LEVAJOINT Waterstop to be welded are identical, clean them with water or a solvent without oil, and dry them.

Clamp the ends of LEVAJOINT to be welded in the LEVAJIGS and cut both ends with a sharp cutter, flush with the faces of the LEVAJIGS.

Open the LEVAJIGS and slide them back, leaving around 10mm of each end appearing, clamp the LEVAJIGS tightly in position, then locate the projecting bars of one jig in the holes of the other.

Place the LEVAKNIFE on the bars between the jigs and slide them together until the LEVAJOINT Waterstop ends are pressed firmly against of the LEVAKNIFE's blades.

The LEVAJOINT should melt without burning or carbonizing.

Hold the LEVAJIGS firmly in position until molten PVC beads appear along both sides of the LEVAKNIFE.

Slide the LEVAJIGS back a little and remove the LEVAKNIFE up so that it takes as little PVC as possible with it. Join the molten ends of the LEVAJOINT by sliding the jigs together by exerting pressure holding the ends firmly together for around 25 seconds to allow molten PVC to fuse completely. Put the LEVAKNIFE off. As it is still hot, clean well the LEVAKNIFE preparing it for the next joint welding.

Without bending the LEVAJOINT, unfasten the LEVAJIGS and remove carefully the LEVAJOINT Waterstop.

When the LEVAJOINT becomes cold, test it by bending it several times, in order to be sure of the melting procedure success.

P.S. Where an electrical outlet is not available, the use of a hot metal blade is possible, provided this blade is heated with a clean flame.

When the required temperature is reached, the LEVAJOINT will melt easily when touched against the blade.

Keep attention to the blade's temperature, if it is too hot, the LEVAJOINT will carbonize.

## INTERSECTION FORMS

Many kinds of intersection pieces may be prepared, here follow some forms:



## HEALTH AND SAFETY

Hot weld site jointing of PVC LEVAJOINT Waterstops results in the liberation of hydrochloric acid fumes. Therefore, good ventilation must be provided or a suitable respirator used in closed places. In open places, such precautions are not necessary as no danger to health exists.

## PRECAUTIONS

Avoid drive nails through center of waterstop when forming.

Never lap waterstop .

All joints must be sealed with a heat sealing method.

Avoid embedding center bulb in concrete. It must be positioned in the center of the joint to insure freedom of movement and proper expansion.

## PROFILE DATA

LEVAJOINT	Section Width in cm.	Minimum Radius on Flat in Meters	Roll Length Meter
CENTER BULB LJ - CB	30	15.0	25.0
	25	15.0	25.0
	20	14.0	25.0
	15	12.0	25.0
PLAIN WEB LJ - PW	30	15.0	25.0
	25	15.0	25.0
	20	14.0	25.0
	15	12.0	25.0
EXTERNAL CENTER BULB LJ - ECB	30	15.0	25.0
	25	15.0	25.0
	20	14.0	25.0
	15	12.0	25.0
EXTERNAL PLAIN WEB LJ - EPW	30	15.0	25.0
	25	15.0	25.0
	20	14.0	25.0
	15	12.0	25.0



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