

PVC WATERSTOPS

Flexible joint sealing for concrete structures

DESCRIPTION AND USES

Waterstops made from virgin, plasticized and stabilized thermoplastic PVC, with no reclaimed PVC. Designed to prevent water passage through joints in liquid-containing or liquid-excluding concrete structures, above or below ground. Applications include foundations, tunnels, swimming pools, reservoirs, sewage and water-treatment plants, retaining walls, culverts, bridges, dams and underground car parks.

FEATURES

Flexible coils are easy to handle, bend around corners and form into curves. Centre-bulb profiles accommodate limited shear movement; ribbed webs anchor into concrete. Sections can be spliced on site using thermostatically controlled electric irons. Resistant to oxidation, fatigue, many waterborne chemicals, alkalis, chlorinated water, seawater, natural salts, diesel oil and acids except organic acids. Does not discolour concrete or cause electrolysis with reinforcing steel.

PHYSICAL PROPERTIES

Property	Test method	Nominal value
Specific gravity	ISO 2781	1.37
Water absorption	BS 2782 / 502A	0.08%
Tensile strength	ASTM D 638	11.3 MPa
Ultimate elongation	ASTM D 638	325 ± 35%
Hardness Shore A/10	-	72 ± 3
Loss of mass at 101°C	BS 2782 / 2	0.17%
Tear resistance	BS 2782 / 3	40 kN/m
Modulus of elasticity	-	800 psi
Low-temperature brittleness	ASTM D746-79 at -26°C	Passed
Low-temperature flexibility	At -20°C	Passed
Low-temperature impact	At -20°C	Passed

SUPPLY AND INSTALLATION QUALITY

Supplied in coils in a range of profiles and widths. T, X and L spliced sections are available by special order. Proper installation is essential: avoid voids, honeycombing, segregation and any condition that increases concrete permeability.

PVC WATERSTOPS

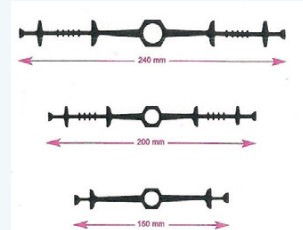
Profile selection and prefabricated connections

AVAILABLE PROFILES AND WIDTHS

Internal expansion

Widths: 240 / 200 / 150 mm

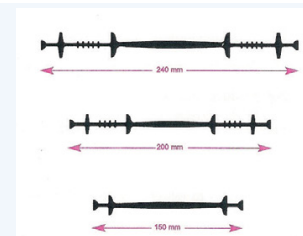
For expansion, contraction or construction joints. Centre bulb accommodates lateral, transverse and shear movement.



Internal construction

Widths: 240 / 200 / 150 mm

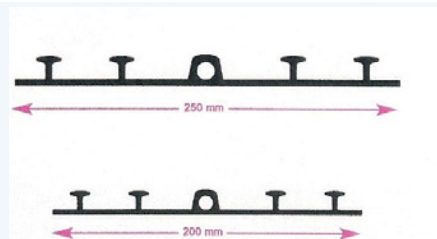
For construction or contraction joints with little or no expected movement. Ribbed profiles provide a watertight seal.



External expansion

Widths: 250 / 200 mm

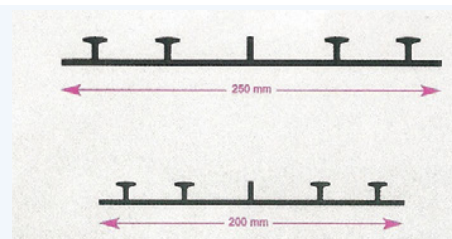
For slab-on-grade joints and walls to be backfilled; external placement assists forming and positioning.



External construction

Widths: 250 / 200 mm

For contraction and construction joints. Plain web with central fin to assist setting out and shutter location.



TYPICAL SPLICES AND TRANSITION PIECES



Flat Cross



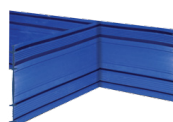
Flat T



Flat L



Vertical Cross



Vertical T



Vertical L

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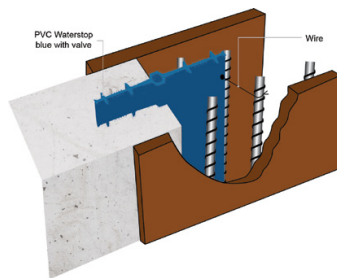
Installation and welding

POSITIONING AND CONCRETING

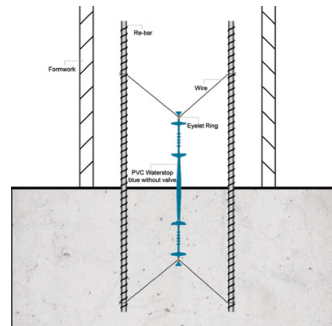
Secure the waterstop with split forms or another suitable method, ensuring correct positioning and embedment. Place the centre bulb exactly at the joint centre. Thoroughly vibrate concrete around the ribs to eliminate voids and honeycombing.

Before the second pour, place copper-clad steel rings as far as possible from the outer edge. Pass tie wires through the rings and secure them to formwork or reinforcement. Use enough ties to hold the waterstop in position during the pour.

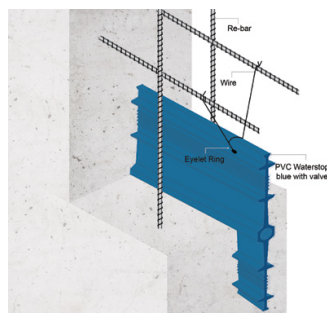
TYPICAL INSTALLATION DETAILS



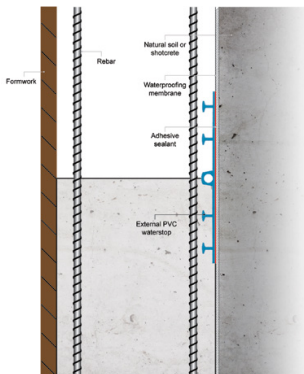
Typical Internal Wall to Wall



Typical Internal Slab to Wall



Typical Internal Wall to Slab



Typical External Wall to Slab

WELDING PROCEDURE

Heat the ends indirectly with a suitable welding iron to $200^{\circ}\text{C} \pm 10^{\circ}\text{C}$. When the PVC begins to melt, align the ends directly using a waterstop combiner and hold firmly until cool, approximately 20 seconds.



Pic 1



Pic 2