

# SERVISEAL<sup>®</sup> Flange 200

External PVC waterstop for movement joints between existing and new reinforced concrete structures

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## Description

SERVISEAL<sup>®</sup> Flange 200 is a PVC waterstop designed for movement joints in concrete basements and substructures at the junction of existing and new reinforced concrete structures. It is suitable for both horizontal (non suspended slabs) and vertical application and provides a passive, permanent, physical barrier to water ingress.

Located on the external concrete face SERVISEAL<sup>®</sup> allows maximum concrete compaction around the ribs. This ensures excellent waterstop to concrete seal minimising the likelihood of water ingress and providing better corrosion protection for the reinforcement.

SERVISEAL<sup>®</sup> can be used in Type B (BS8102: 2009) reinforced concrete structures to protect against water ingress through movement for water-resisting basements. As part of the GCP system, SERVISEAL<sup>®</sup> provides joint protection for up to Grade 3 basements as defined in BS8102: 2009.

## Advantages

- Specially designed for movement joints between existing structures and new build
- Convenient installation – avoids fixing within the reinforcement cage
- Easy welding – PVC melting temperature easily achieved on-site to facilitate welding
- Pliable – remains flexible at low temperature.
- Structure protection – external waterstops prevent water ingress at the outside face of the structure.
- High quality PVC compound – ensures long term expansion performance
- Compatibility – SERVISEAL<sup>®</sup> is compatible with all GCP joint protection products and below ground water proofing systems
- Salt water resistant – unaffected by salt water and saline conditions.

## Application

For movement joints between new and existing buildings and in accordance with BS8102 to provide:

- Joint protection of water-resisting basements – Type B protection
- Joint protection of water-resisting basements with PREPRUFE<sup>®</sup> system – Type A protection
- Joint protection of water-resisting basements with HYDRODUCT<sup>®</sup> CF system – Type C protection.

Tunnels and subway

Abutments and retaining walls

## Limitations

SERVISEAL® is not suitable for walls of water retaining structures. Servitite® waterstop cast centrally in the concrete wall to resist internal water pressure should be specified for water retaining structures.

## Installation

A continuous waterstop network should be used at all joints to prevent the ingress of moisture using only factory produced fabrication for changes of direction or profile. Site jointing should be limited to simple butt welds.

Before concreting, waterstops must be clean and free from concrete laitance, oil, grease or any other contamination that might prevent a good waterstop to concrete bond.

### Water resisting basement (out of PREPRUFE® system):

For horizontal application, SERWISEAL® Flange 200 should be laid directly onto the blinding concrete with timber stop-ends. For vertical application, mechanically fix the waterstop to the formwork at 250 mm intervals staggered either side of the central rib. Mechanical fixings should not be fixed too tightly to the formwork otherwise removal of formwork may cause debonding of the waterstop from the concrete.

### Water resisting basement with PREPRUFE® system:

For horizontal application at the joint location, SERWISEAL® Flange 200 should be placed onto the PREPRUFE® using BITUSTIK™ between the membrane and the waterstop. For vertical application the complete length of SERWISEAL® will require bedding onto BITUSTIK™ and PREPRUFE® with additional mechanical fixings required at the top of the vertical length to keep it in place. The SERWISEAL® range is the recommended PVC waterstop system to complement the GCP below-ground waterproofing systems. The SERWISEAL® Flange 200 should also be fixed to existing reinforced concrete structures as described below:

- Mark the position of the SERWISEAL® Flange 200 on the existing reinforced concrete
- Apply the BITUSTIK™ on the reinforced concrete along the marked position.
- Bed the SERWISEAL® Flange 200 onto the BITUSTIK™.
- Apply a second layer of BITUSTIK™ on SERWISEAL® Flange 200.
- Mechanically fix the Galvanized Steel Plate onto the second layer of BITUSTIK™ and through the SERWISEAL® Flange 200.

Use Internal Corner Piece 100 and External Corner Piece 200 for fixing the galvanized steel plate at corners.

### On-site Welding:

The ends of the waterstop to be joined must be straight and square and carefully aligned in the jig. Heat the welding knife using a small SERWISEAL® off cut to test that the knife has reached the correct welding temperature. Insert the welding knife between the two waterstop ends to be welded and press them onto the blade. Hold this position and allow the waterstop to melt along the full length of each face and an even molten bead of PVC can be seen. Slide the jig apart before lifting the welding knife upwards in one smooth action. Immediately slide the jig back to bring the molten waterstop ends firmly together for approximately 30 seconds.

## Supply

SERVISEAL® Flange 200	10 m coil
Weight	35 kg
Standard Junction	Flat L / Vert L
Special Junction Fabrication	Junction made on demand to suit with site requirements. Please contact your GCP representative.
Fixing Accessories (ordered separately)	
Galvanised Steel Plate	80 x 10 x 1450 mm
Supply by one piece	Thickness 10 mm
Internal Corner Piece	100 side length 100 mm
Supply by one piece	Thickness 10 mm
External Corner Piece	200 side length 200 mm
Supply by one piece	Thickness 10 mm
BITUSTIK™	150 mm x 12 m
Ancillary Products	AEROFIL®, GCP Sealants
Equipment by GCP	Welding Knives Electrical Knife 110v or 200v Jointing Jigs Jig SERVISEAL® Flange

Equipment by Others: Fine tooth saw, wire brush, Stanley knife, 110v or 220v power source, blow lamp or gas torch if nonelectrical mild steel knife is used, mechanical fixing.

## Typical Properties

PROPERTY	VALUE	TEST METHOD
Shore Hardness A	75 ± 5	ISO 868
Tensile Strength	> 10 N/mm <sup>2</sup>	ISO 527-2
Elongation at break	> 300 %	ISO 527-2

*All declared values shown in this data sheet are based on test results determined under laboratory conditions and with the product sample taken directly from stock in its original packing without any alteration or modification of its component parts.*

## Health and Safety

There is no legal requirement for a Safety Data Sheet for SERWISEAL® or AEROFIL®. For health and safety questions on these products please contact GCP Applied Technologies. For GCP Sealants read the product label and Safety Data Sheet (SDS) before use. Users must comply with all risk and safety phrases. SDS's can be obtained from GCP Applied Technologies or from our web site at [gcpat.com](http://gcpat.com). Irritating fumes (Hydrogen Chloride) will be liberated when the product is heat welded. Ensure adequate ventilation. The coil must be carried by two persons.

## NBS Specification Clause

Refer to Clause E40 310.

## North America customer service: 1-877-4AD-MIX (1-877-423-6491)

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