UNISWELL® RING

HYDROPHILIC RUBBER FORM-TIE WATERSTOP



Product Features

UNISWELL® RING Form-Tie Ring Swellable Waterstop is fitted onto form ties and split bolts before concreting, to seal the water path along the tie through the concrete wall. It gives long-lasting protection against water ingress at every form tie in water-retaining and water-excluding structures.

UNISWELL® RING Form-Tie Ring Swellable Waterstop is crafted from a distinctive hydrophilic rubber sealing compound that expands in a controlled manner when it encounters moisture. This expansion creates a compression seal within or around the form-tie system in the concrete structure, providing a permanent, flexible, and watertight barrier.

Advantages

- Long-term durability and integrity
- Unaffected even in repeated wet and dry cycles
- Retains original shape after repeated contraction
- Snug fit on the form tie and stays in position during concrete placement
- Prevents water leakage by absorbing moisture and swelling
- Sustains effective seal in wet conditions. Permanently active
- Easy to install. Slides over the form tie, no cutting or welding required
- Slow expansion rate to prevent damage to freshly placed concrete during curing
- Non-toxic, suitable for use in waters in contact with human or marine life

Fields of Application

Water Tanks & Reservoirs	Basement & Underground Car Parks
Water & Sewerage Treatment Plants	Tunnels & Subways
Dam, Culverts & Spillways	Retaining Walls
Swimming Pools	Roof Decks & Podium Areas
Bund Walls	Lift Pits & Service Pits

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Technical Properties

Property	Test Method	Unit Measurement	Result
Service Temperature Range	In-House	°C	-30 to 50
Hardness	ASTM D 2240	SHORE A	45 ± 0.3
Tensile Strength	ASTM D638	MPa	4.67 ± 0.28
Elongation at Break	ASTM D638	%	850
Expansion Volume Rate	ASTM D471	%	>300
Hydrostatic Head Resistance	Hydraulic Rig Tester	m	70

*Hardness, tensile strength, elongation and expansion: typical results from independent laboratory tests (2025); test report available on request. Values subject to 5–15% tolerance.

Physical Properties

Material	:	Chloroprene Rubber & Hydrophilic Groups
Colour	:	Black
Size Of Product	:	**UNISWELL® RING 5mm Thickness** I.D 14mm x O.D 40mm I.D 16mm x O.D 40mm I.D 30mm x O.D 60mm I.D 18mm x O.D 40mm I.D 35mm x O.D 60mm I.D 20mm x O.D 45mm
Quantity Per Box	:	1000 Pcs with I.D 14,16,18 & 20mm 500 Pcs with I.D 25, 30 & 35mm

Safety Precautions

It is essential that all personnel involved in the installation are equipped with appropriate **personal protective equipment (PPE)**, such as gloves and safety glasses. Adhering to site-specific safety protocols and guidelines is critical to maintaining a safe working environment. Additionally, the waterstop material should be handled with care to prevent any damage.

Shelf Life & Storage

Store **UNISWELL® RING** in its original sealed packaging in a dry, covered area, off the ground and away from direct sunlight, rain and standing water. As **UNISWELL®** is a hydrophilic material, keep it dry until installation, because premature contact with water or moisture will cause it to swell. Protect from dust, oil and contamination.

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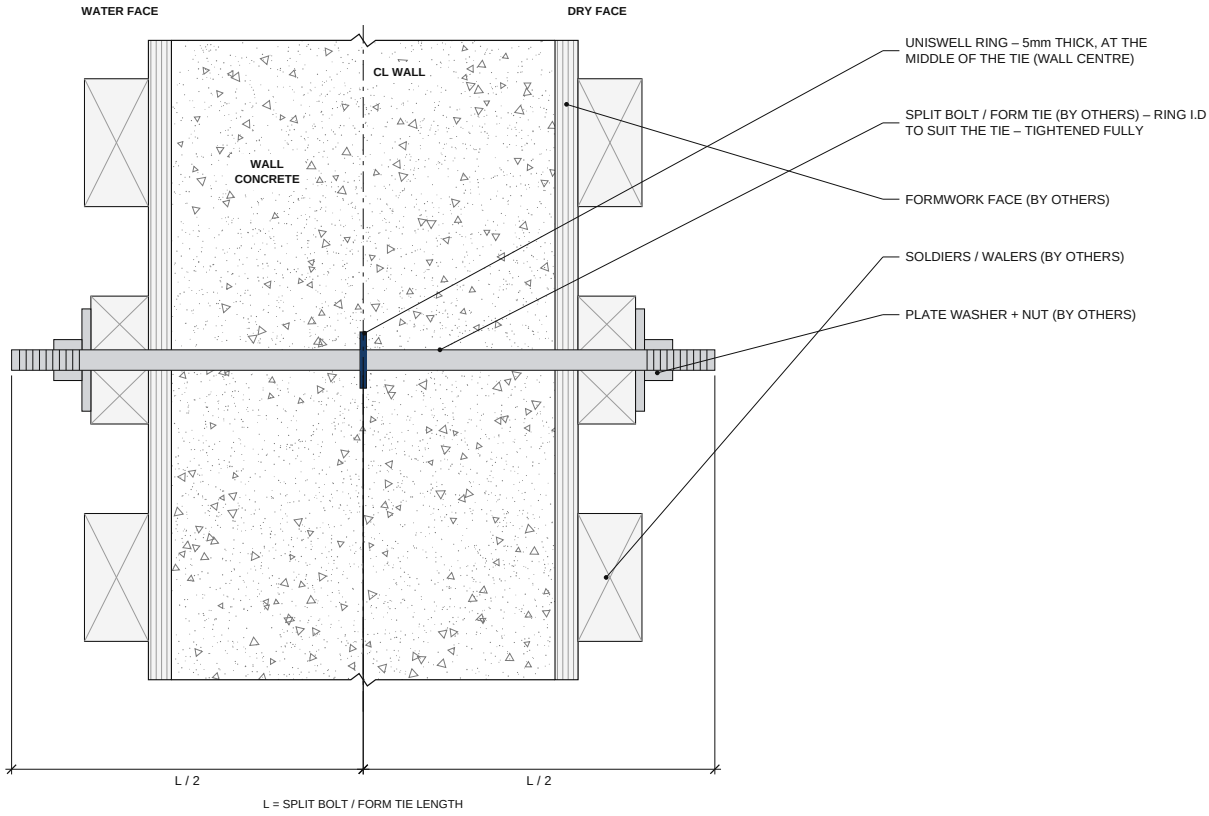
Typical Drawing & Applications

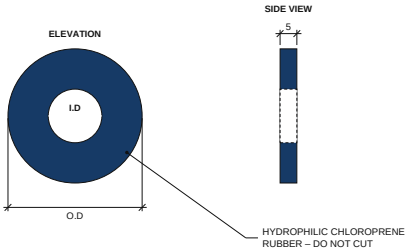
1 FORM TIE THROUGH WALL

Section · formwork in place · not to scale



2 UNISWELL® RING

Enlarged · not to scale



LEGEND

- Wall concrete
- Formwork (by others)
- UNISWELL® RING
- Split bolt / form tie (by others)

Illustrations only – not for construction. Refer to drawing UR-SW-06 and the project engineer.

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Installation Procedures

1 Selection | 2 Fitting | 3 Before Concreting | 4 Concreting

Step 1
SELECTION

Select the **UNISWELL® RING** whose internal diameter (I.D.) gives a snug fit on the form tie or split bolt, so that the ring grips the tie and cannot slide during concreting. Refer to Physical Properties for the available sizes.

Make sure the form tie is clean and free from dirt, dust, oil, grease and release agent where the ring will sit.

Step 2
FITTING

Do not cut the ring. Open it slightly, slide it over the form tie and position it at the middle of the tie (wall centre), so that it will be fully embedded in the concrete. Press it firmly in place so that it cannot move during concreting.

Fit a ring on every form tie or split bolt that passes through a water-retaining or water-excluding wall, and tighten the split bolt fully.

Step 3
BEFORE CONCRETING

UNISWELL® RING is hydrophilic and swells on contact with water. Keep it dry until the concrete is placed.

If a ring has been exposed to water and has started to swell before concreting, replace it with a new ring.

Step 4
CONCRETING

Place and compact the concrete fully around the form tie and the ring, with no voids or honeycombing.

Once the concrete has set, water travelling along the tie is absorbed by the ring, which swells to form a compression seal around the tie. Formwork, tie type, tie spacing and the treatment of tie ends and recesses are as specified by the project engineer.

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