

DATWYLER TUNNEL GASKET SOLUTIONS

INNOVATIVE and EXPERIENCED

NO MATTER WHAT
THE FUTURE HOLDS

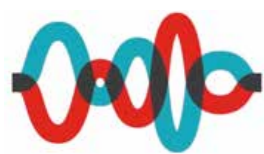


DATWYLER



DATWYLER TUNNEL GASKET SOLUTIONS

The right decision for your project



Solution partner

Co-creating every link in the chain, from the very first idea to the moment of final delivery. We develop your specific seal for your requirements.



Knowledge partner

Sharing our know-how and talent because we believe on the power of a trusting relationship with our customers. Since the merger with Phoenix Dichtungstechnik GmbH we can look back on 650 references worldwide.

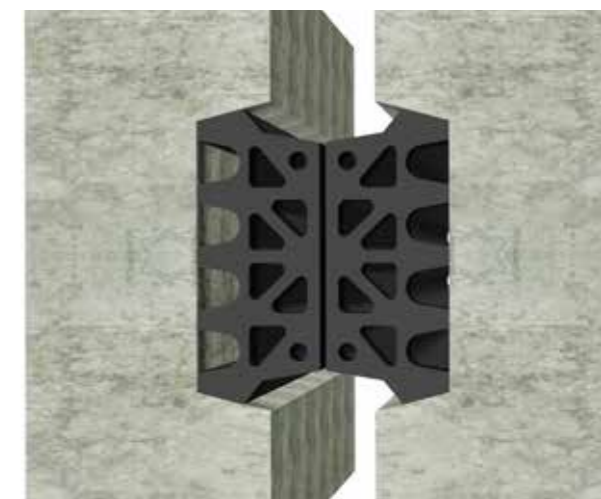


Global partner

Providing reliable solutions on a global scale throughout the entire product life cycle.

SEGMENT GASKETS

Datwyler segment gaskets started first in 1969 with the New Elbe Tunnel in Hamburg, Germany and currently helping to seal the Follo Line Tunnel in Oslo, Norway. They are available in more than 50 different cross-sections to cover the entire range of today's various kinds of projects. Metro tunnels, River crossing tunnels, Road and Railway tunnels, Cable tunnels, Waste water and Water supply tunnels all around the world can be found on a long list of more than 650 successful reference projects. In addition to the standard program shown Datwyler can offer various tailor-made solutions. During many years of deep involvement in the largest, deepest or riskiest tunnel projects, Datwyler has set-up international standards for profiles, testing methods and quality control systems, all of which are established in many projects with our international partners.







Segment Gasket

DATWYLER SEGMENT GASKETS COMPLY ACCORDING TO THE MAIN WORLDWIDE GUIDELINES



ANCHORED





M 38933 Doha	M 38936 Rennes	M 80103 Frankfurt	M 38928 Oslo
			
26 * 10 mm	33 * 10 mm	36 * 12,5 mm	44 * 12 mm

With more than 10 years of experience Datwyler first introduced gaskets that are directly anchored in the concrete segment offering a variety of remarkable advantages:

- Leaner process
- Cost saving at segment production
- Higher adhesion of gasket to segment groove
- Higher tightness performance by maximized water resisting gasket surface into the ring system
- Environmentally friendly

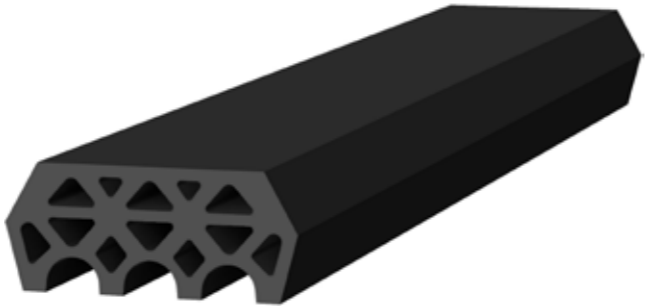


GLUED





M 38596 Portland	M 38903 Mexico	M 38587a Groene Hart	M 38573 Wesertunnel
			
26 * 10 mm	33 * 10 mm	36 * 12,5 mm	44 * 12 mm

Glued gaskets are the traditional kind of installation of the Datwyler gasket and adhesive system.

- Longest experience with these type of gaskets since 1969
- Applying is possible at the precast plant or at the tunneling site before the installation of the segments
- Easy to check
- Easy to repair in case of damages



MIXED EVOLUTIVES

M 38912 Lai Chi Kok	M 38916 Hong Kong	M 38923 CVV	M 38925 Alaskan Way
			
26 * 10 mm	33 * 10 mm	33 * 10 mm	44 * 12 mm

The Composite Seal combines two different sealing technologies - a compression seal and a hydroswellng strip.

- Additional sealing capacity due to high performance EPDM hydrophilic strip
- Self-healing effect in case of leakages of improper ring build
- Insertion of the hydroswellng cord right at the shaft before the segment goes into the tunnel

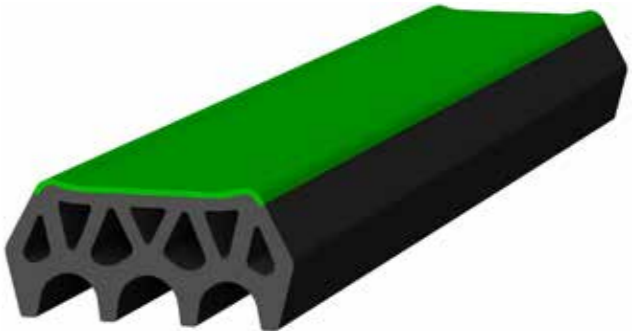


COEX

M 74008 Bangalore	M 74002a Singapore	M 74029 Jurong Island
		
26 * 17 mm	33 * 16 mm	36 * 19 mm

Coex gaskets are provided with a thin colored hydrophilic layer at the contact surface.

- Expands in contact with water
- Swelling process starts after a few hours of contact with water
- Even after years embedded in dry environment the swelling reacts in the same way



FIBER ANCHORED

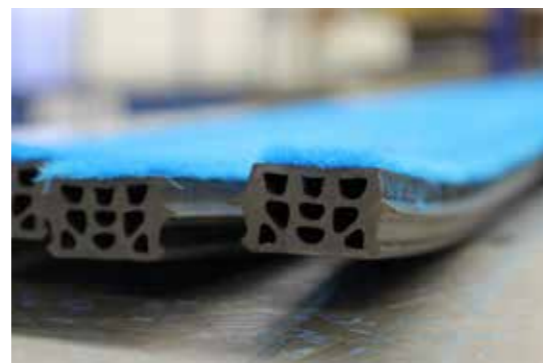
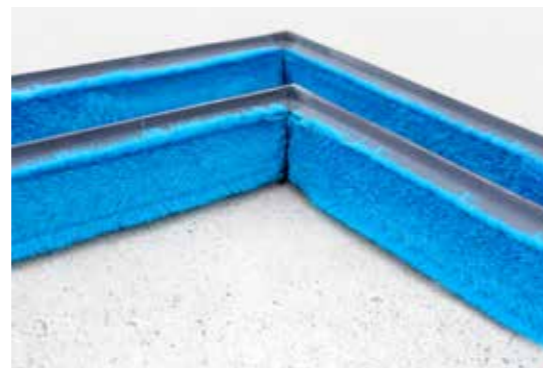
INNOVATION

As a leader of innovations, Datwyler has enhanced glued and „feet“-anchored gaskets. Following the request from our customers, we are able to provide now anchoring the full gasket bottom with thousand of fibers, in contrast to the previous method of linear anchoring with feet made of rubber. The new fiber-anchored gaskets enable a freely positioning of the gasket in the concrete segment.

Your benefit

- Safe and easy installation
- Enhanced packaging in cardboard boxes
- No cavities in the groove underneath the gasket
- Avoiding shifting during ring installation
- Improved built-in corner configuration
- Improved spalling behavior
- Improved gasket-concrete connection due to a completely anchored surface
- Easy to repair
- Lean process at segment production due to inline gasket installation
- Elimination of adhesive and the entire gluing procedure

Application

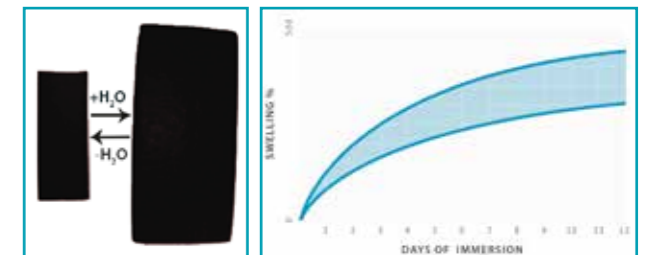


BLACK SWELL

Datwyler Black Swell is the 2nd sealing defense for your project. It is based on an EPDM compound with swelling capabilities. For the first time it is possible to combine the excellent properties of the EPDM polymers with swelling material.

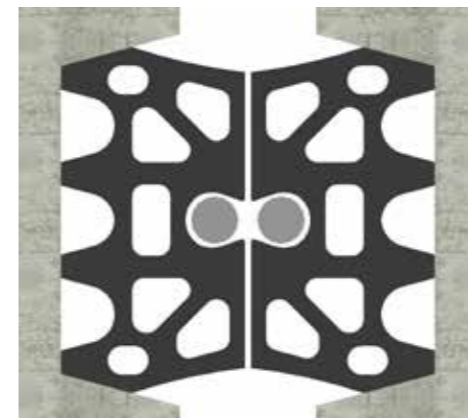
Your benefit

- Reliable and reversible swelling performance
- EPDM compound with hydrophilic nano particles
- Excellent chemical and ozon resistance
- High resistance against permanent deformation
- High water impermeability



Application

Datwyler Black Swell is available in various shapes, e.g. as molded parts or extrusion profiles depending on the application.



As composite tunnel gasket



Black Swell before and after swelling with moulded corner



As separate seal next to the tunnel gasket



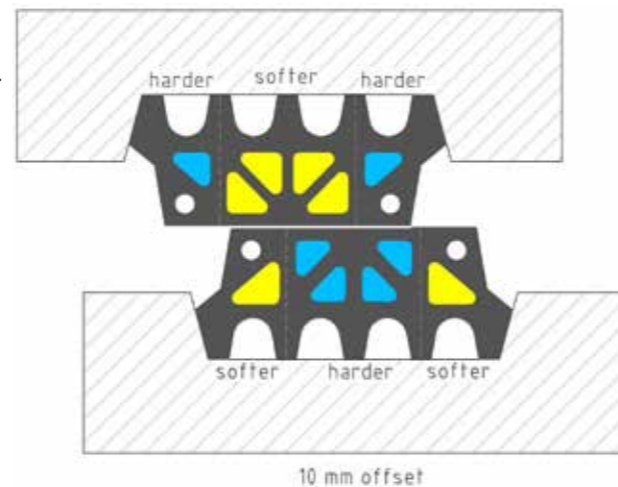
Installation of Datwyler Black Swell into the composite Tunnel gasket

DatBalance SYSTEM

Due to the tolerances that appear when erecting the tunnel ring, offsets between single segments can result. As a result, varyingly strong restoring forces and hence poorer water-tightness performance might occur.

Your benefit

- The restoring forces are kept nearly constant despite varying offset conditions
- Constant tightness performance for a defined offset range



Bossler Tunnel in Germany as part of the project „Albaufstieg“ was the first project where our DatBalance principle has been applied.

INTERNATIONALLY PATENTED SYSTEM

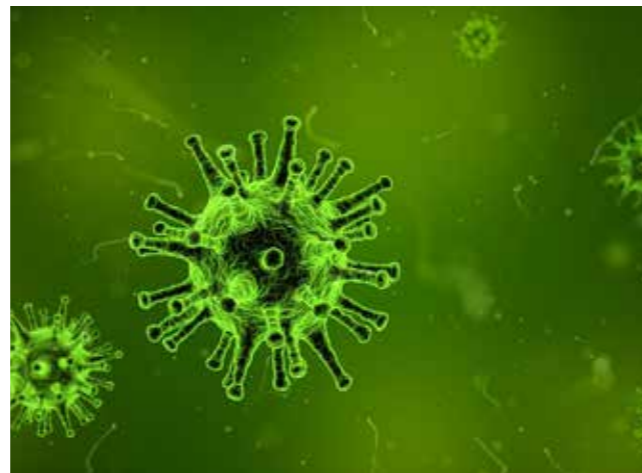
ANTIMICROBIAL PROFILE

NEW

Numerous microorganisms, like bacteria, fungi, algae, are present in soil and groundwater. In highly polluted soil, a biofilm can grow on the surface of built-in gaskets and can damage the material and cause additional aging. Additives made of transition metal oxides prevent biogrowth on the gasket's surface, thus making our antimicrobial gaskets longer lasting.

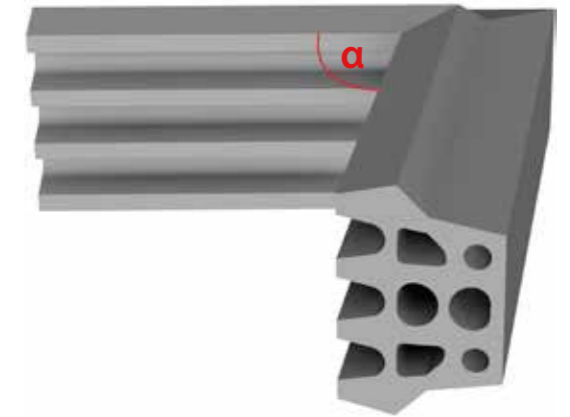
Your benefit

- No additional aging caused by biological activities
- Good long-term effect (long-life antimicrobial effect)
- No changes in physical properties
- Patented principle of operation
- Environmentally friendly

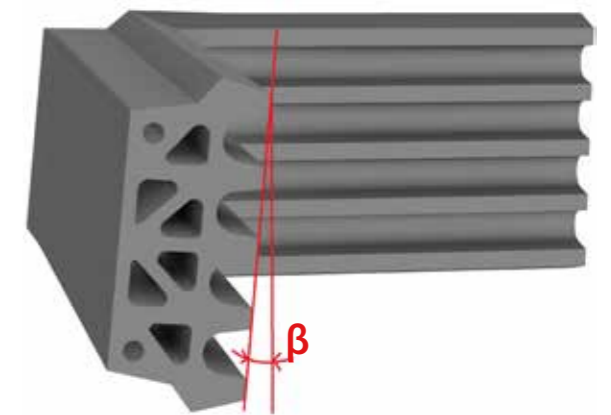


PERFORMANCE CORNER

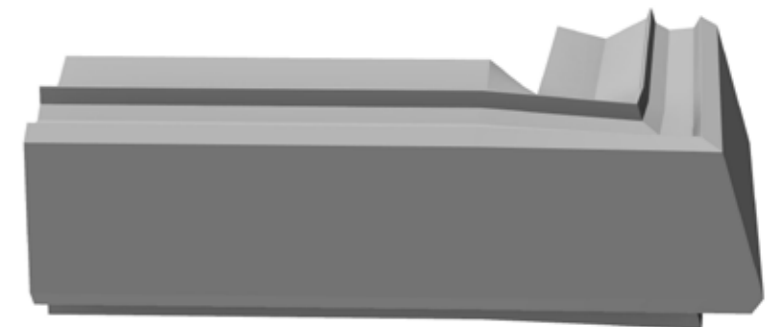
Glued-on gasket corner with adjusted opening angle α



Glued-on gasket corner with twisting angle β



Anchored gasket with project based twisted angle corner β



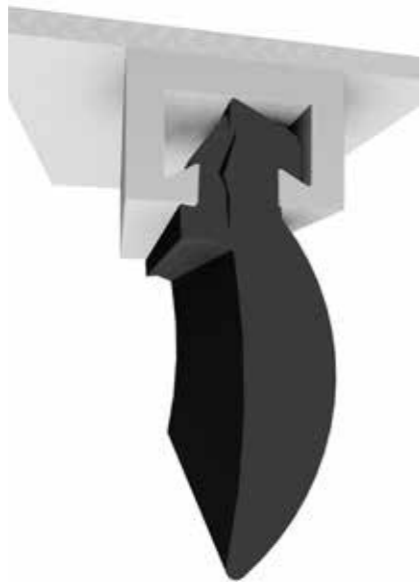
Combisegments[®] gasket corner (System HKFT) with adapted opening angle α and twisting angle β



SPECIAL PROFILES

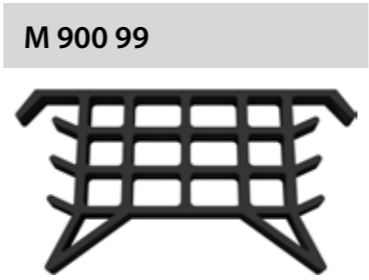
Starting Seals

- Are used to seal the gap between the excavation line and TBM
- Mounted on a special support frame
- Datwyler provides starting seals and filler profiles



Drainage Profile

- Leaking joints can limit service and threaten safety
- Profiles guide water in joints in a controlled way
- Preventing unwanted and damaging ingress of water



DAThesive G 3000 PLUS

This product of Datwyler has been developed to fulfill the high demands when mounting elastomer seals to concrete segments. The glue offers both economical use and safety. In cooperation with the manufacturer „WIWA“, adjusted spraying equipment is available for even more economical use of our G 3000 Plus. We have also available adhesive Datwyler FP 75 in case of repairs.

HEALTH COMPATIBLE

APPLICATION & TEST METHODS

It has always been part of our philosophy to assist our customers with maximum support while using our products.

- Our staff takes care of handling instructions on site
- Own testing laboratory for water tightness
- Performance testing in steel and concrete
- Project-related tests prepared in accordance with project specific requirements



MORE THAN 650 PROJECTS WORLDWIDE



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STUVA

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ASSOCIATION FRANÇAISE
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REPRESENTATIVE

