



RG ROM GUMMI

WINDTURBINES & FOUNDATIONS.



RG ROM GUMMI

FROM THE BUTTOM OF THE FOUNDATION. TO THE TOP OF THE WIND TURBINE.

RG ROM GUMMI manufactures and offers an impressively wide range of solutions and products in rubber, foam or plastic for the offshore and wind turbine industries. With our impressive track record of more than 65 wind farms, we are a leading manufacturer of high-quality and customer-specific solutions in rubber, foam or plastic for various parts of offshore foundations, wind turbine towers, and nacelles.

With our innovative mindset, solid craftsmanship, and state-of-the-art production facilities, we can offer the best and most advanced solutions, regardless of the project's size.



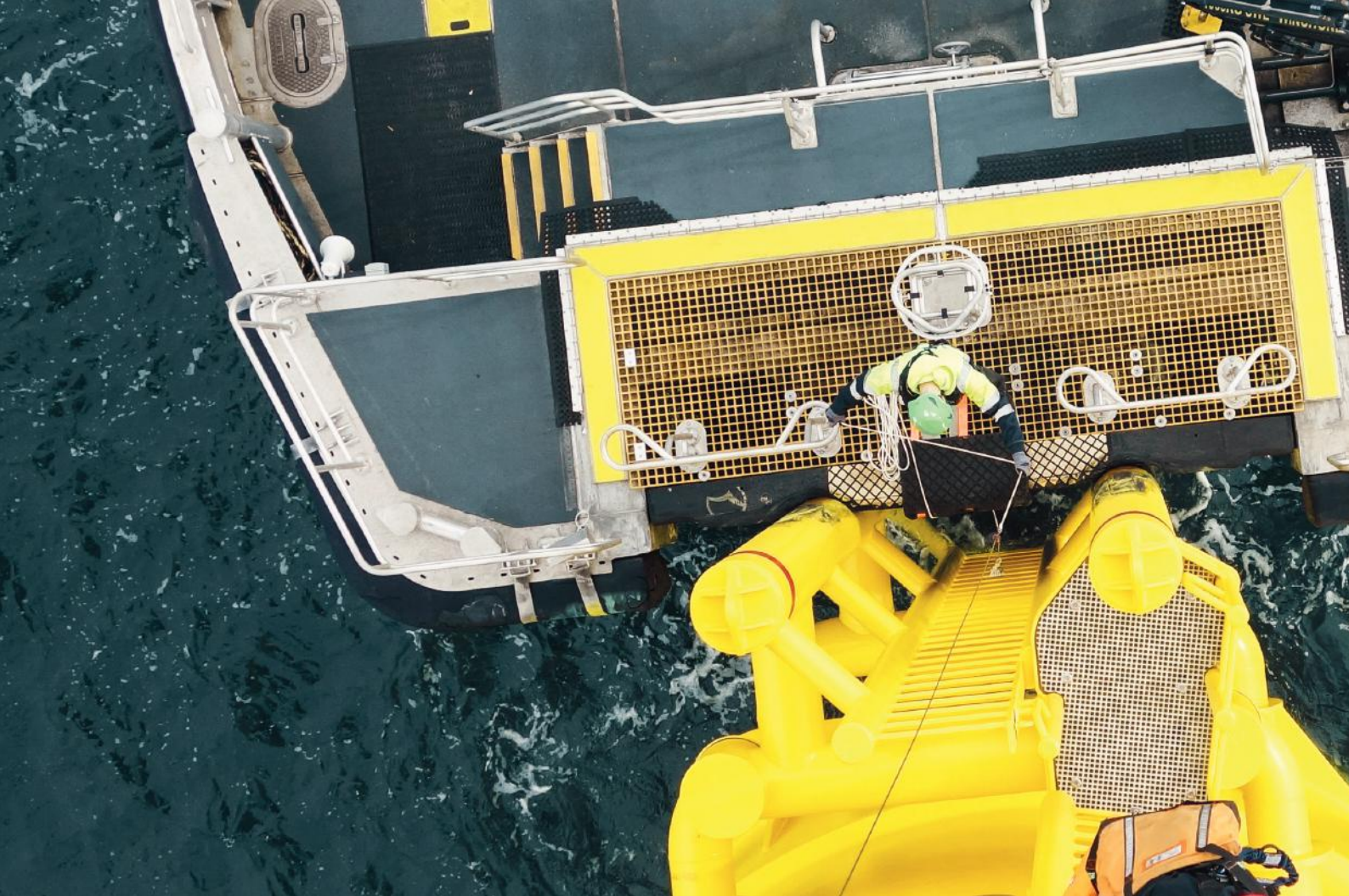




RG ROM GUMMI

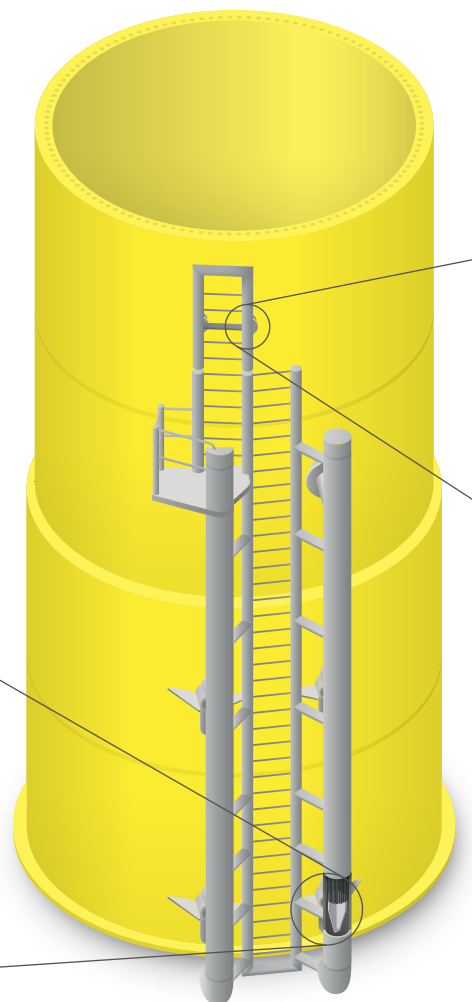
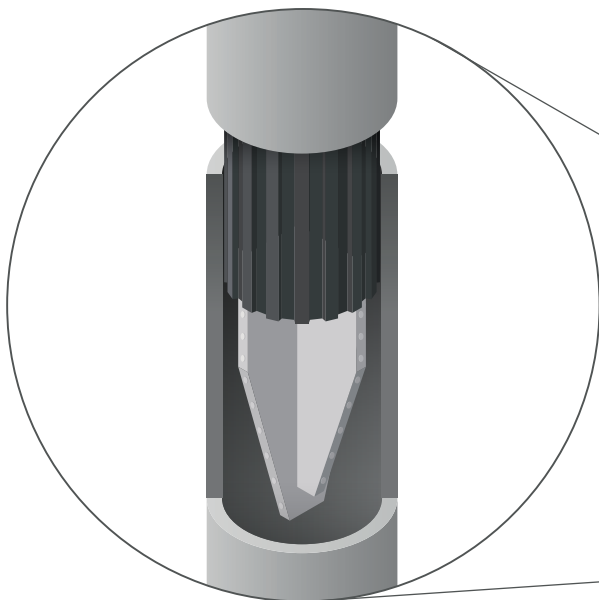
***DURABLE AND
SHOCK-ABSORBING.
PERFECT FOR BOAT
LANDINGS AND J-TUBE
GUIDES.***

RG ROM GUMMI is today among the world's leading producers of rubber solutions for boat landings, ladders and j-tube guides on offshore wind foundations. Our unique expertise in hot vulcanized rubber gives our rubber solutions unparalleled durability and wear resistance, designed and quality tested to achieve the necessary lifespan.



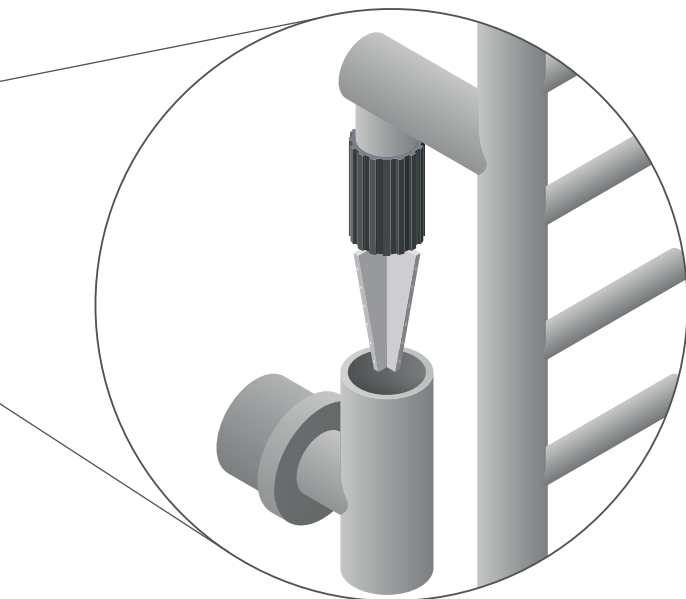
WE HAVE A UNIQUE AND SPECIALIZED KNOW-HOW.

We have designed and manufactured rubber solutions for boatlandings since 2008. With our many years of experience and in-house production facilities, we can manufacture hot-vulcanized rubber solutions for boatlandings that are market-leading in quality and durability.



FROM GUMMI

RUBBER SOLUTIONS THAT PROTECT THE STEEL FROM CTV-OPERATIONS.



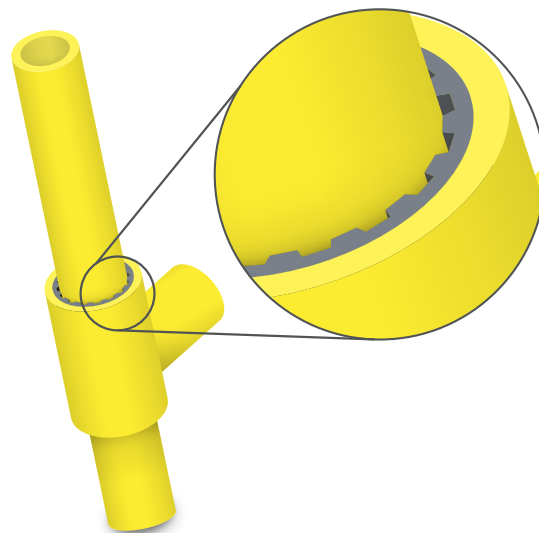
EXCELLENT ADJUSTMENT FOR EASY INSTALLATION.

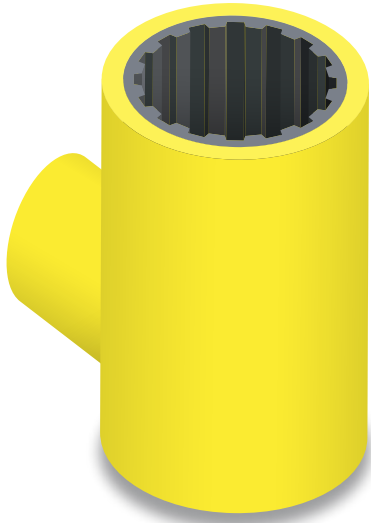
We are able to adjust the thickness and pattern of the rubber with a outstanding precision, ensuring an easy and trouble-free installation of the boatlanding on the foundation itself.

Furthermore, we have the facilities to test our rubber solutions in terms of the number of tons required for the proper installation of the boatlanding.

THE PERFECT SOLUTIONS FOR EVERY J-TUBE GUIDE.

RG Rom Gummi are also leading in rubber solutions for J-tube guides where the rubber has to be applied on the inner sides of the steel pipe. We can adjust the thickness and pattern for the rubber with an impressive precision to ensure a durable securing and protection of the J-tube.





EXTERNAL OR INTERNAL RUBBER? IT DOESN'T MATTER TO US.

With our many years of knowhow in hot-vulcanizing of rubber we are able to deliver a durable solution whether the rubber has to be applied on the outside or inside at the steel component. We can always adjust the thickness and pattern for the rubber with an impressive precision.

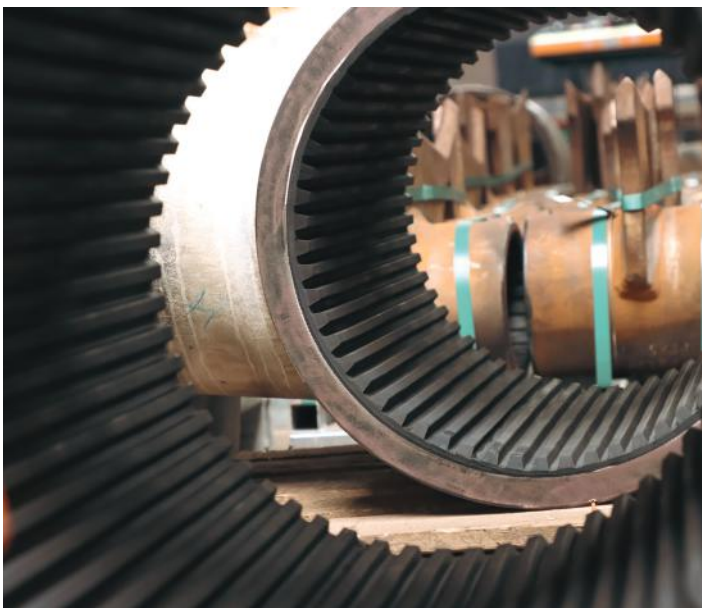




FROM GUMMI

**A FRACTION OF OUR
SOLUTIONS FOR BOAT
LANDINGS AND J-TUBE
GUIDES.**







RG ROM GUMMI

***HAVE PEACE OF MIND WITH
OUR QUALITY TESTED
RUBBER SOLUTIONS.***

We know that our hot-vulcanized rubber solutions are best-in-class, and their durability and wear resistance are market-leading. To prove their durability meets the quality requirements of the offshore and wind industries, we have tested their adhesion strength on steel, showing that their lifespan reaches at least 27.7 years.

AN ADHESION THAT IS STRONGER THAN THE RUBBER ITSELF.

We have tested the two rubber types, neoprene and RG60, which are the most commonly used rubber types for applications in the offshore and wind industries. RG60 is our proprietary rubber type, possessing the same properties as neoprene. All our tests demonstrate that our hot vulcanized adhesion is stronger than the rubber itself. See the test results on pages 14-15.

The testing was carried out in compliance with international requirements (ISO/IEC 17025:2017) and in compliance with Danish Technological Institute's General Terms and Conditions regarding Commissioned Work accepted by Danish Technological Institute.

TEST CONDITIONS.

Two batches of test samples were subjected to accelerated aging in a heating cabinet at 70°C before testing.

The purpose of the accelerated aging test was to assess whether the mechanical properties of the rubber materials change during accelerated aging in a heating cabinet corresponding to approx. 28 years projection.

In the forced aging test, test pieces are exposed to accelerated aging in a heating cabinet at a temperature of 70°C. Two batches have been subjected to an aging process, which corresponds to a projected lifetime of 5 and 27,7 years, respectively. The test values after ageing are compared with the values obtained before aging.

Polymeric materials are broken down by oxidation, and accelerated aging in a heat cabinet is formalized in e.g., ASTM F1980-21.

Here, as a general rule, it is recommended not to age at more than 70° (TAA), and it is described how the acceleration factor depends on the difference between the aging temperature and the reference temperature at which the samples "normally" rest.

The rubber material used are typically used outdoors, which is why we can somewhat conservatively set the reference mean temperature in use to be 10°C (TRT). The acceleration factor Q10 is set to 2, whereby the acceleration factor (AAF) can be calculated:

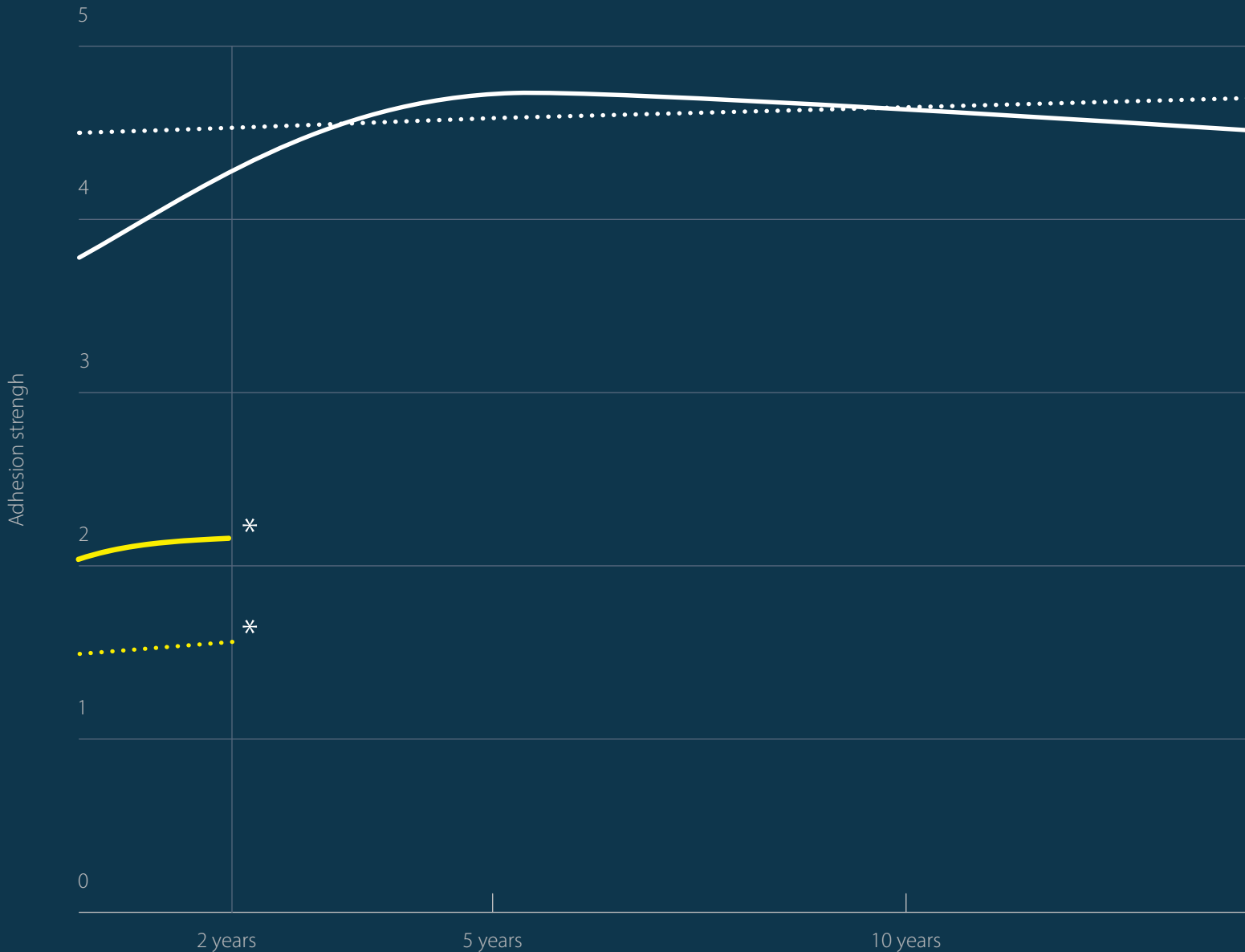
$$AAF = Q_{10}^{\left(\frac{TAA-TRT}{10}\right)} = 64$$

With an acceleration factor of 64, 5,2 months in a heating cabinet at 70°C corresponds to approx. 27,7 years at 10°C. The test pieces were conditioned and tested at 23 ± 2°C and 50 ± 5% R.F. The test was carried out with a tensile test speed of 0,4 mm/S.



RG ROM GUMMI

DISCOVER THE DIFFERENCE IN DURABILITY BETWEEN HOT- AND COLD-VULCANIZED RUBBER IN 27.7 YEARS.



Month of a

Hot Vulcanizing on steel

RG60 rubber 3.2 mm —

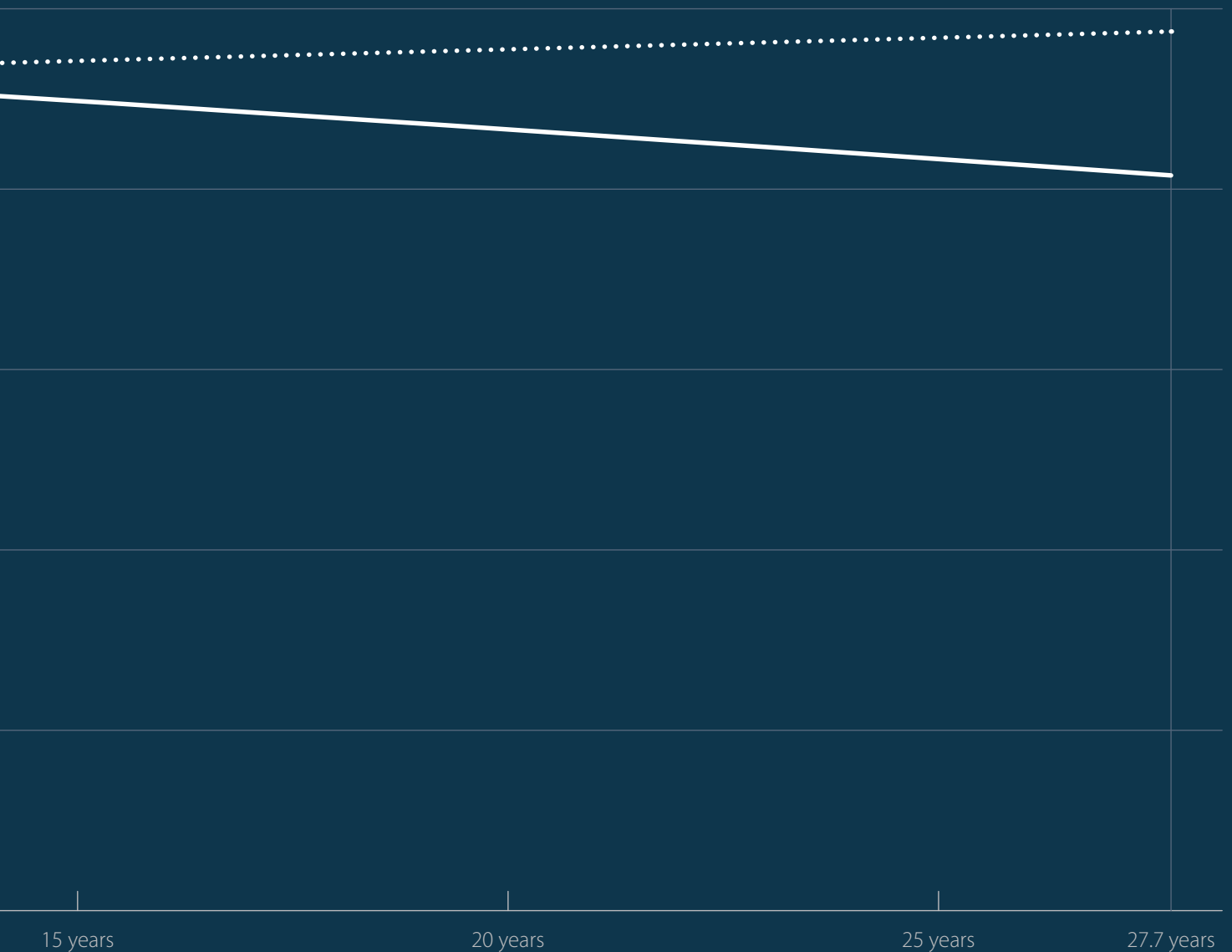
Neoprene rubber 10 mm ·····

Cold Adhesion on steel

RG60 rubber 3.2 mm —

Neoprene rubber 10 mm ·····

* Due to the environmental conditions prevalent at wind farms, including temperature fluctuations and severe frost, the adhesive strength of cold vulcanization is significantly compromised over time. Consequently, a guarantee for the adhesion lasting more than 2 years cannot be provided.



accelerating

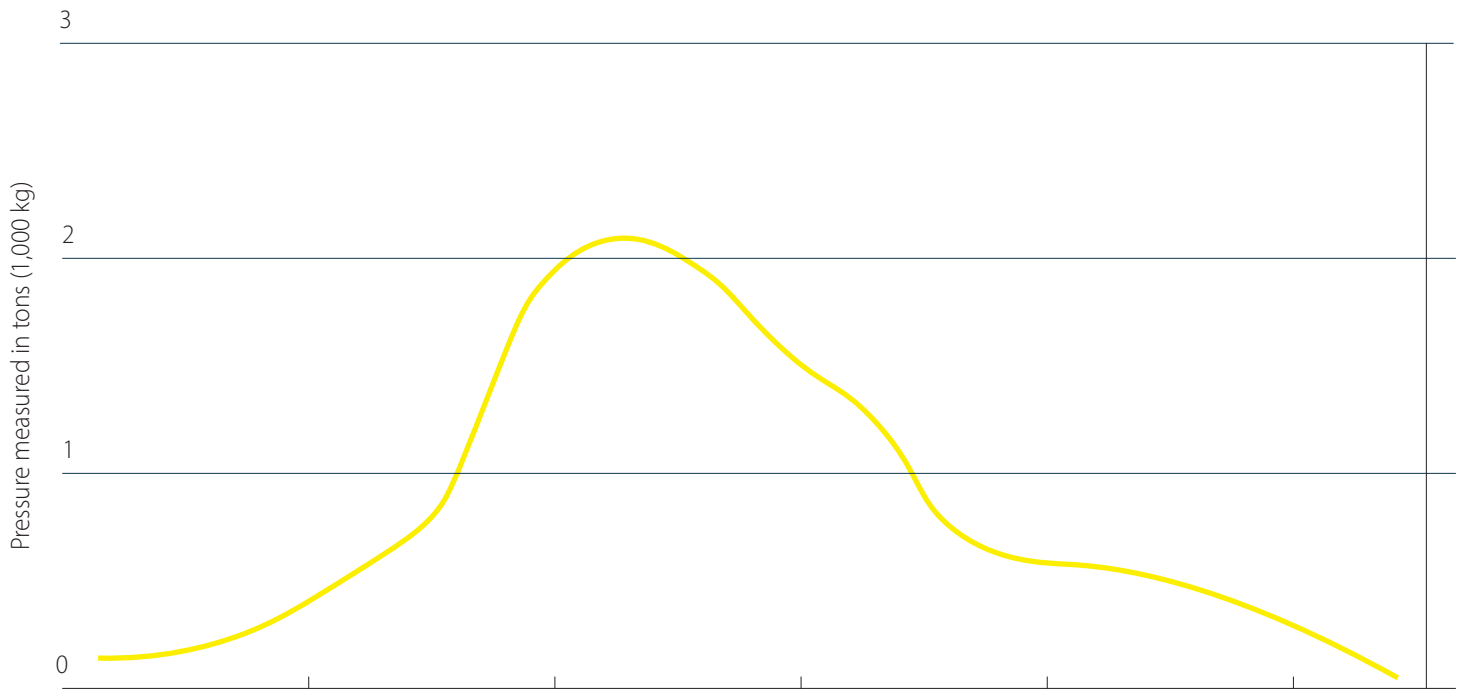
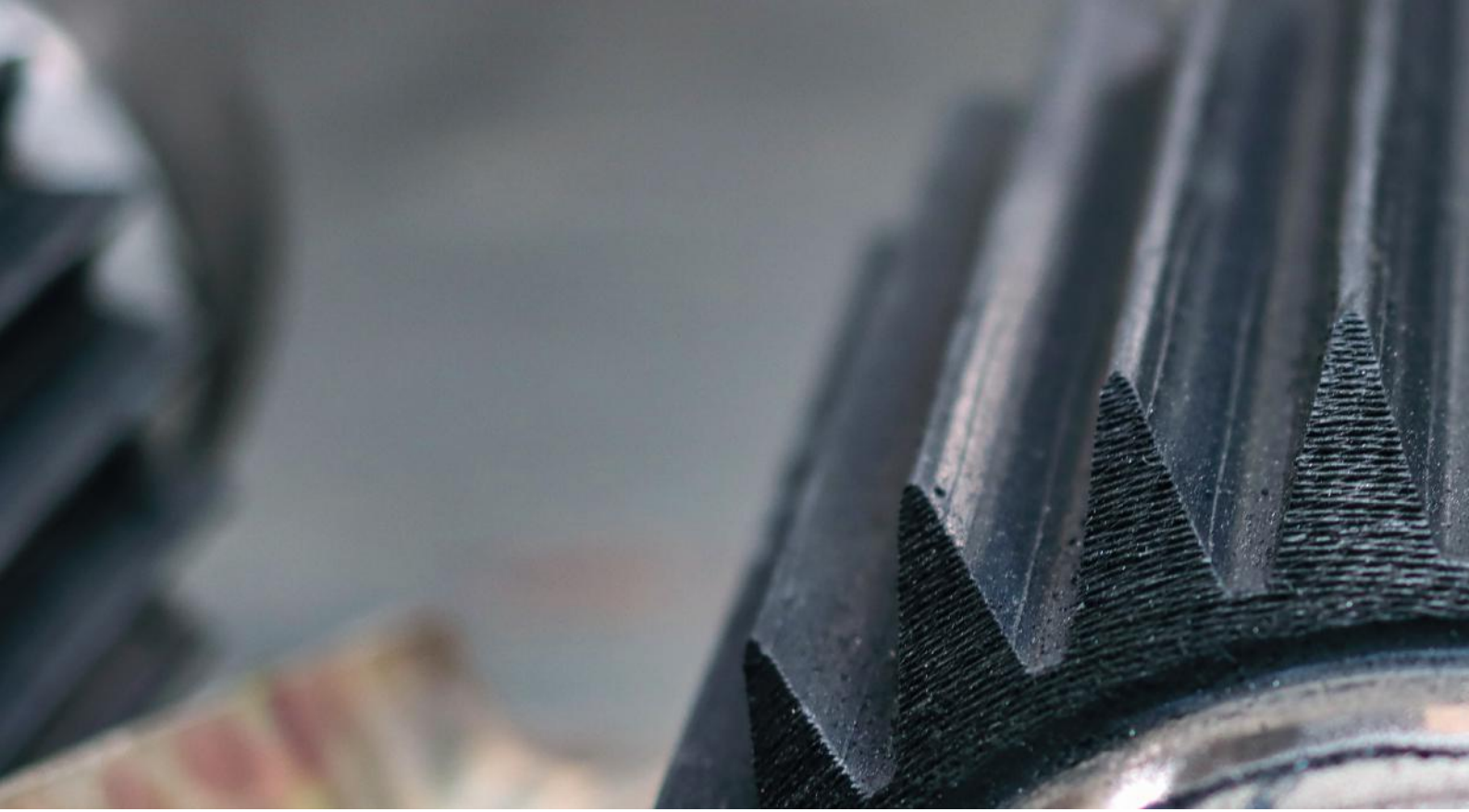
RG ROM GUMMI

IN DOUBT ABOUT THE DESIGN? LET'S TEST IT WITH A MOCK-UP.

As a designer or engineer of offshore wind turbine foundations, including boat landings, you are aware that the rubber coating on the boat landing significantly influences its ability to slide into the transition pieces of the wind turbine foundation during installation.

Uniquely, we can test your design ideas and visualize how the rubber affects a boat landing installation. This allows you to develop a final design that is fully optimized before production begins. The test also provides a real-time view of how the rubber's design is impacted after the actual installation.





We are able to test how much pressure it takes to get a part from a boat landing through a transition piece. This data indicates whether the boat landing can be installed using its own weight.



FROM GUMMI

LET'S FIND THE MOST OPTIMAL DESIGN. IN CLOSE COLLABORATION WITH YOU.

1.

THOROUGH TESTING AND VISUALIZATION OF YOUR DESIGNS.

If you have more design ideas in mind, we can easily test and visualize multiple variations on the same day. In addition to testing different designs, we also test various scenarios and factors that may impact the outcome of the installation. For example, we test how seawater or the addition of lubricants on the rubber or transition piece can affect friction.

2.

FINE-TUNING AND ADJUSTMENT. QUICKLY AND EFFICIENTLY.

After each test, we can quickly fine-tune and adjust the design of the rubber and subsequently test the new changes. Too much rubber or an incorrect design results in the boat landing not being able to be installed using its own weight due to excessive friction. Conversely, too little rubber can result in vibrations and insufficient protection against impacts from CTVs.

3.

A FINAL DESIGN OPTIMIZED FOR YOUR UNIQUE PROJECT.

Through multiple thorough tests and adjustments, we jointly find the most optimal design for the rubber solution, combining maximum protection and seamless installation on the wind turbine foundation. This enables you to develop a finalized design that is fully optimized before commencing final production.

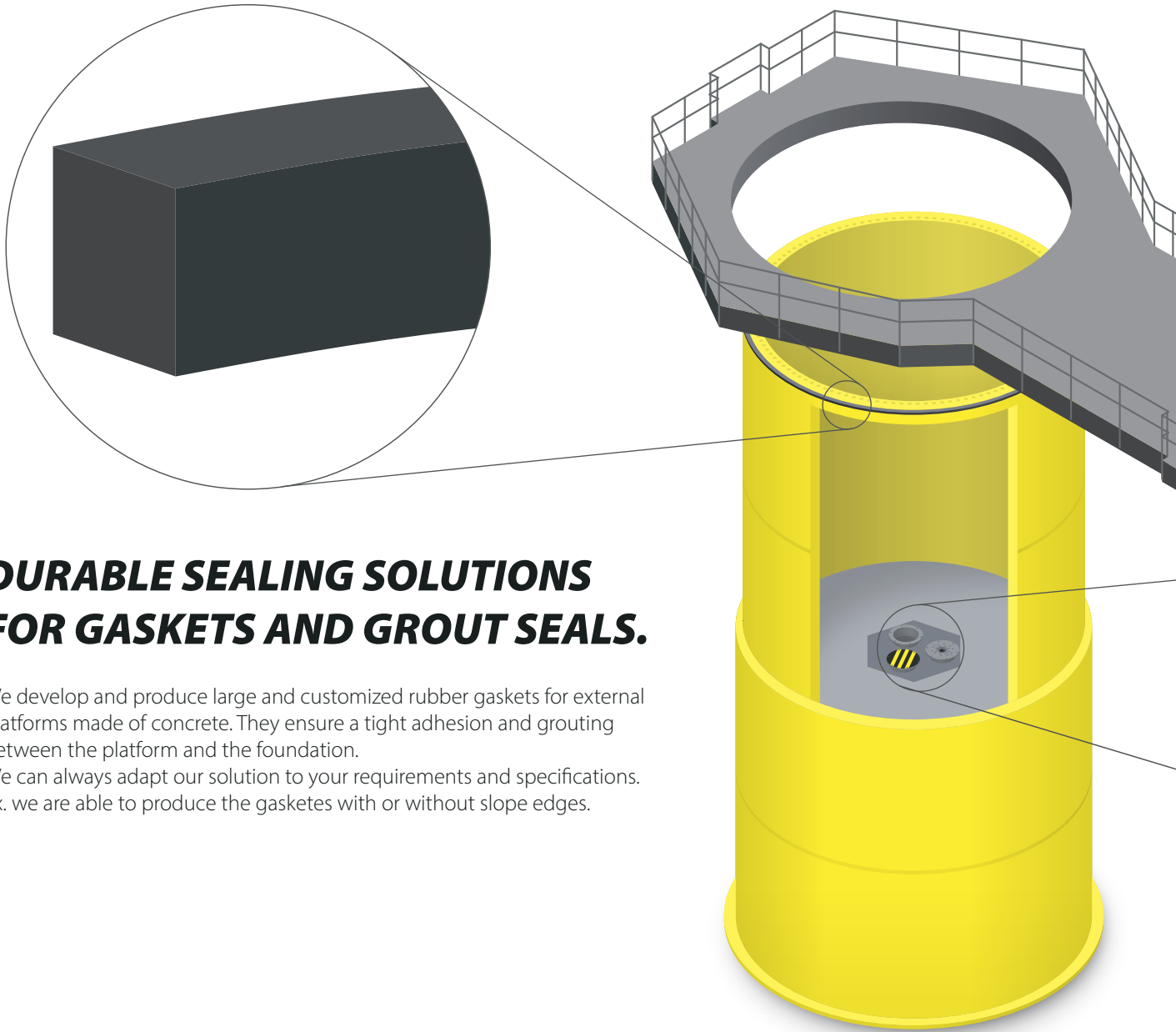




FROM GUMMI

SOLUTIONS THAT SEAL TIGHTLY, CLOSE GAPS, AND DAMPEN VIBRATIONS.

Our unique expertise and knowledge in rubber molding and hot-vulcanization of various rubber qualities make us a formidable manufacturer of sealing solutions and vibration damping solutions. This includes airtight gaskets, cableholes manhole gaskets, grout seals, and vibration dampers.



DURABLE SEALING SOLUTIONS FOR GASKETS AND GROUT SEALS.

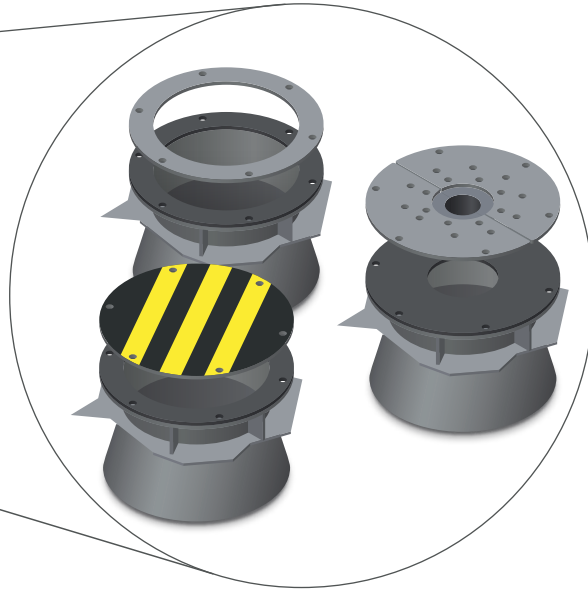
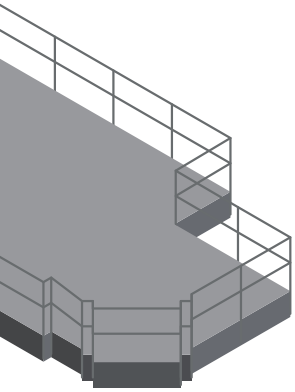
We develop and produce large and customized rubber gaskets for external platforms made of concrete. They ensure a tight adhesion and grouting between the platform and the foundation.

We can always adapt our solution to your requirements and specifications. Fx. we are able to produce the gasketes with or without slope edges.



GASKETS FOR CABLE HOLES AND MAN HOLES.

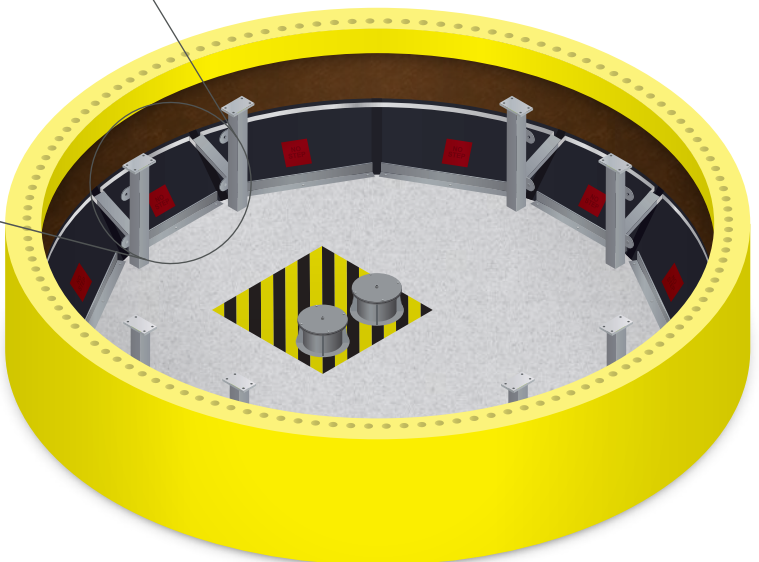
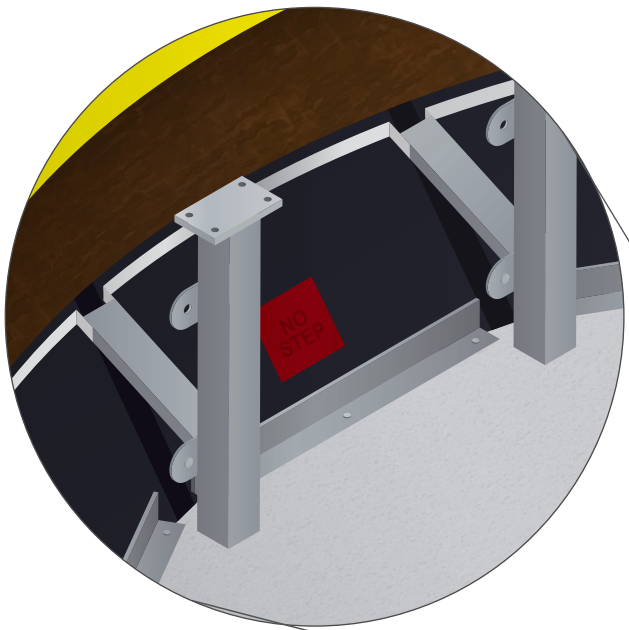
RG ROM GUMMI are experts in developing and manufacturing high-quality customised gaskets for all types of manholes or cableholes. Our gaskets can be manufactured in different rubber grades and qualities to match the specific requirements for the project.





AIRTIGHT MEMBRANES IN DURABLE RUBBER.

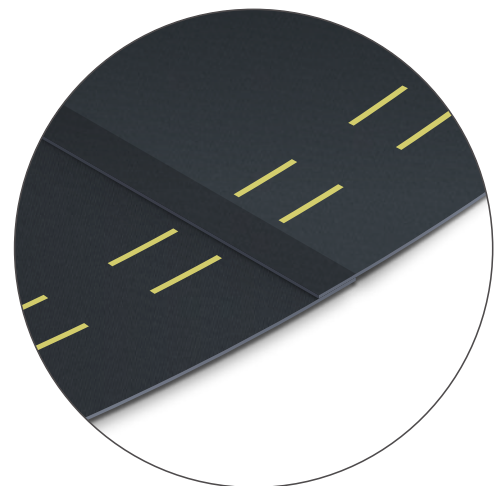
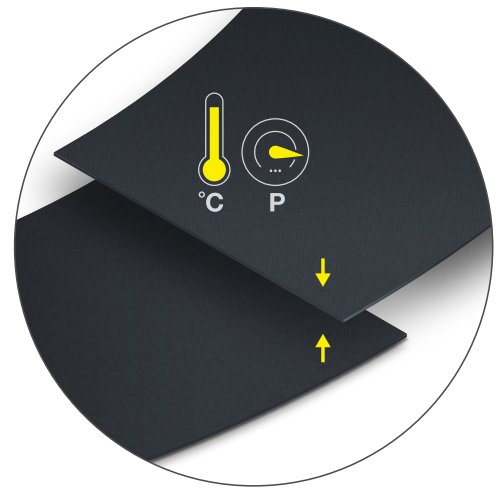
With our expertise in hot vulcanization, we have developed a method for producing large airtight membranes for offshore wind turbine foundations. The hot vulcanization ensures that the membrane achieves unmatched durability and that its lifespan meets the requirements of the offshore and wind turbine industry.

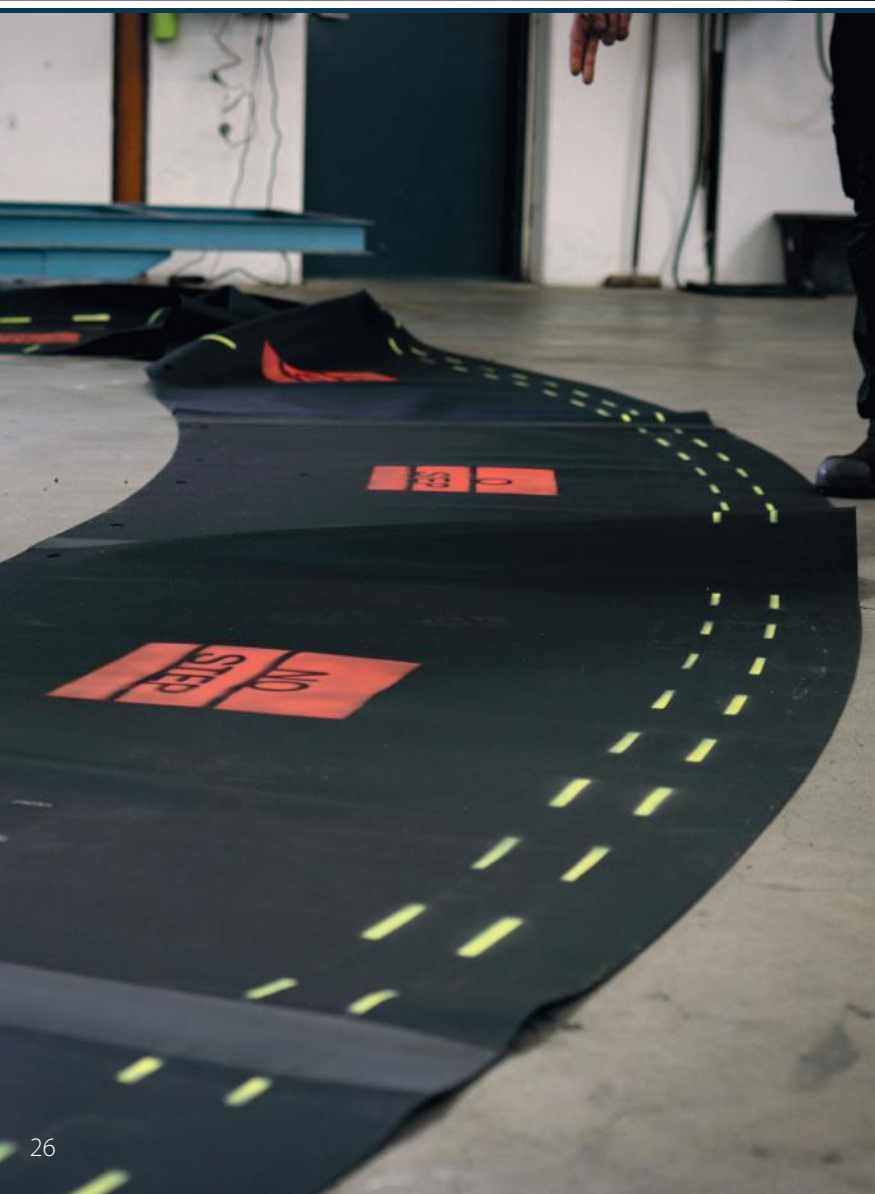




IMPRESSIVE DIMENSIONS. OUTSTANDING DURABILITY.

When the joints are hot vulcanized, they achieve the same durability as if the gasket were produced in one piece. We use this method, for example, in the manufacture of membranes and gaskets for soft sealing, where the the diameter of the sealing solution often exceeds 8 meters.





RC ROM GUMMI
**A FRACTION OF OUR
SEALINGS SOLUTIONS
FOR FOUNDATIONS.**



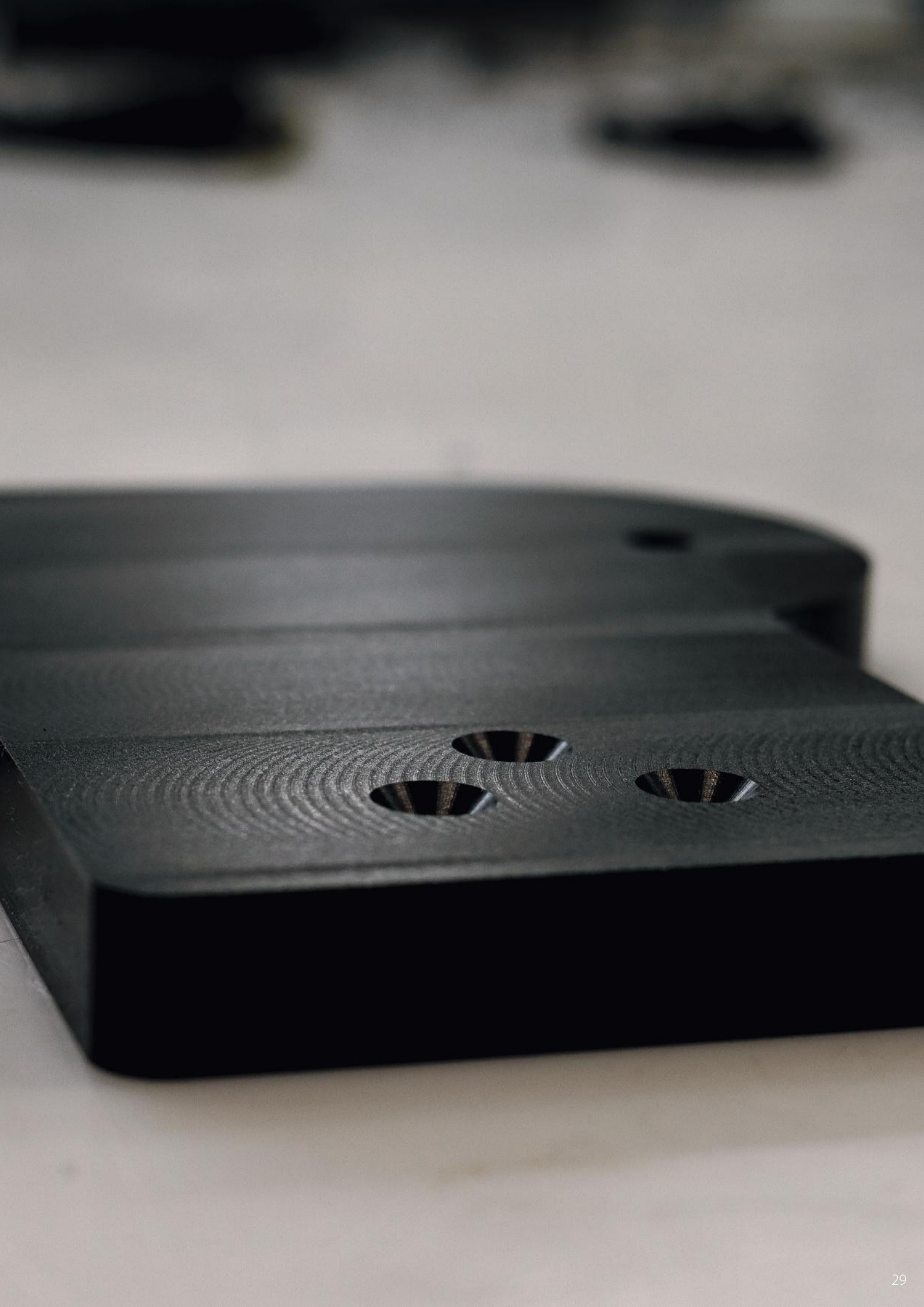


RG ROM GUMMI

***SOLUTIONS THAT
REDUCE NOISE,
PROTECT PARTS, AND
INCREASE SAFETY.***

RG ROM GUMMI produces a wide range of different solutions in rubber, foam and plastic that reduce noise, protect parts, or enhance safety. These include, among others, interlayers and sliding guides in plastic, molded rubber solutions, and anti-slip plates.

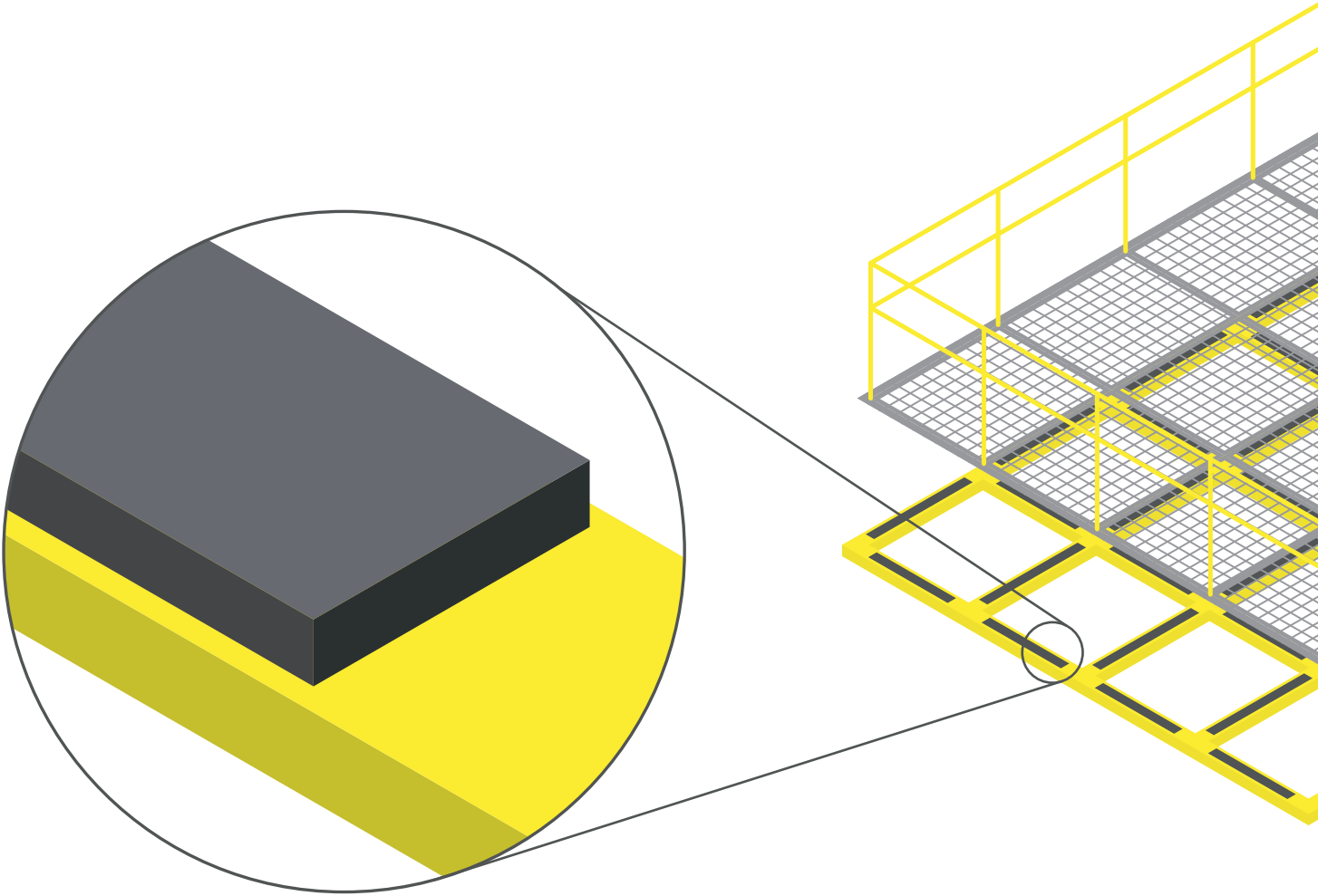


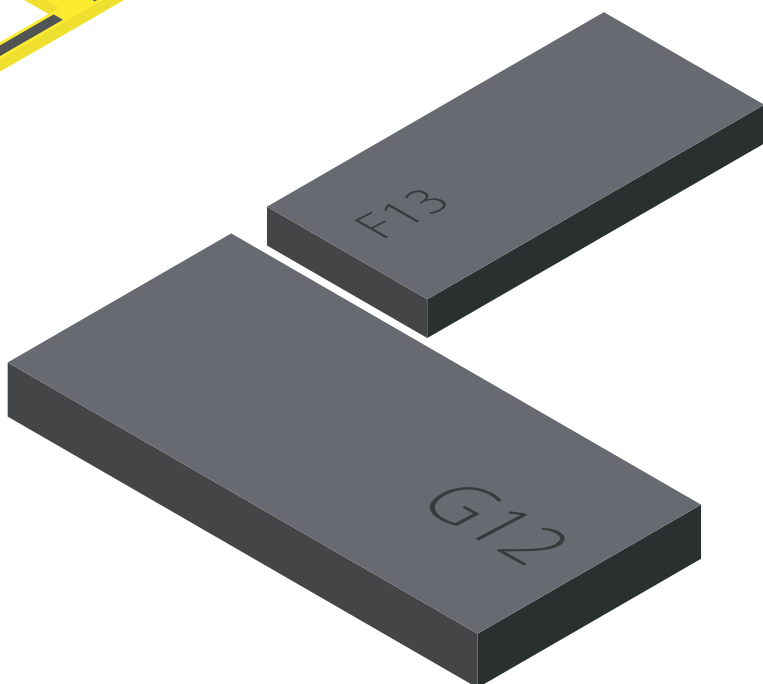
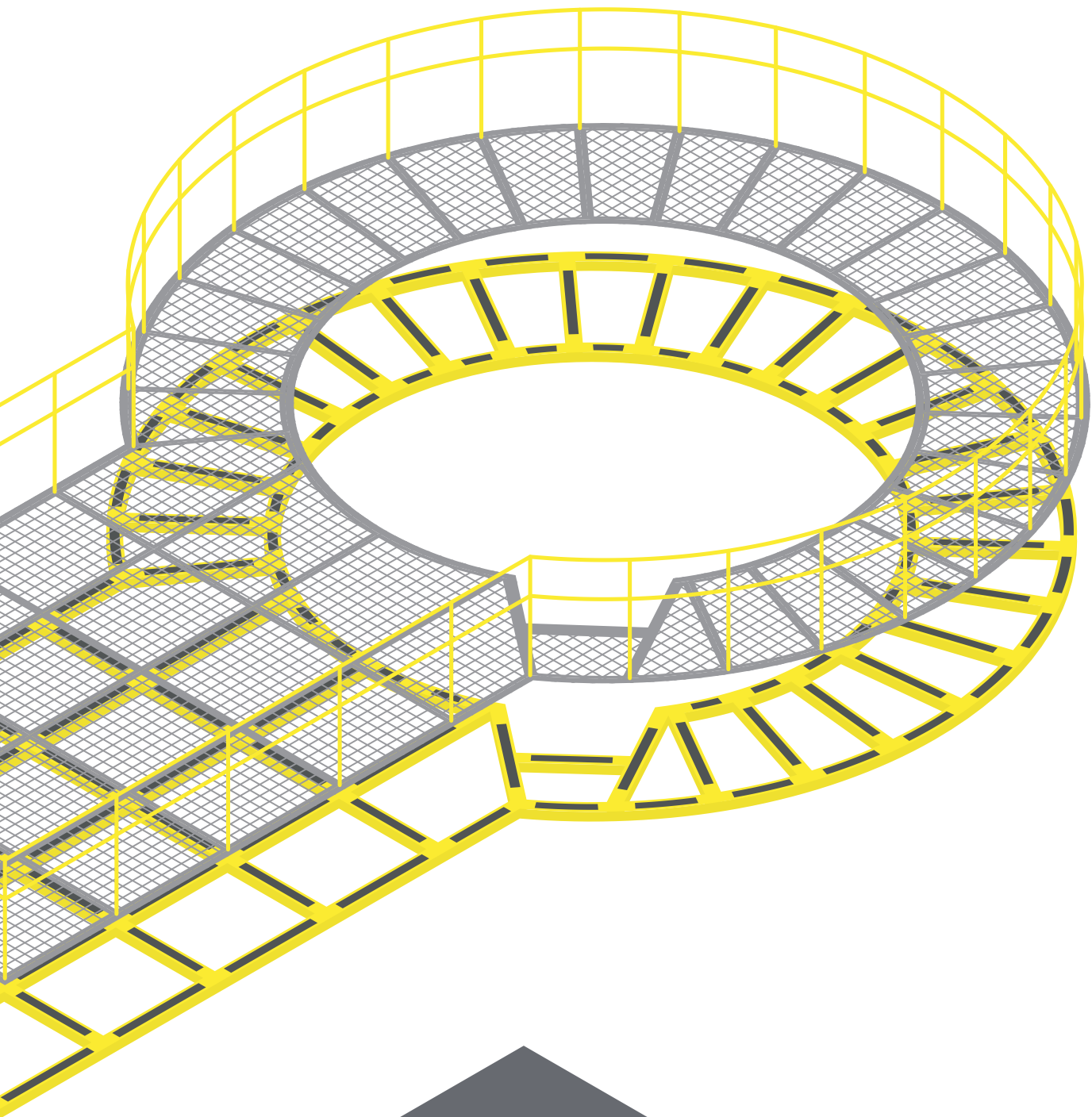


EFFECTIVE MID-LAYER/PROTECTION LAYER IN RUBBER OR PLASTIC.

We are manufacturing durable solutions in rubber or plastic as mid-layer/protection-layer for working platforms that equalize the pressure from the gratings and protect the steel from wear.

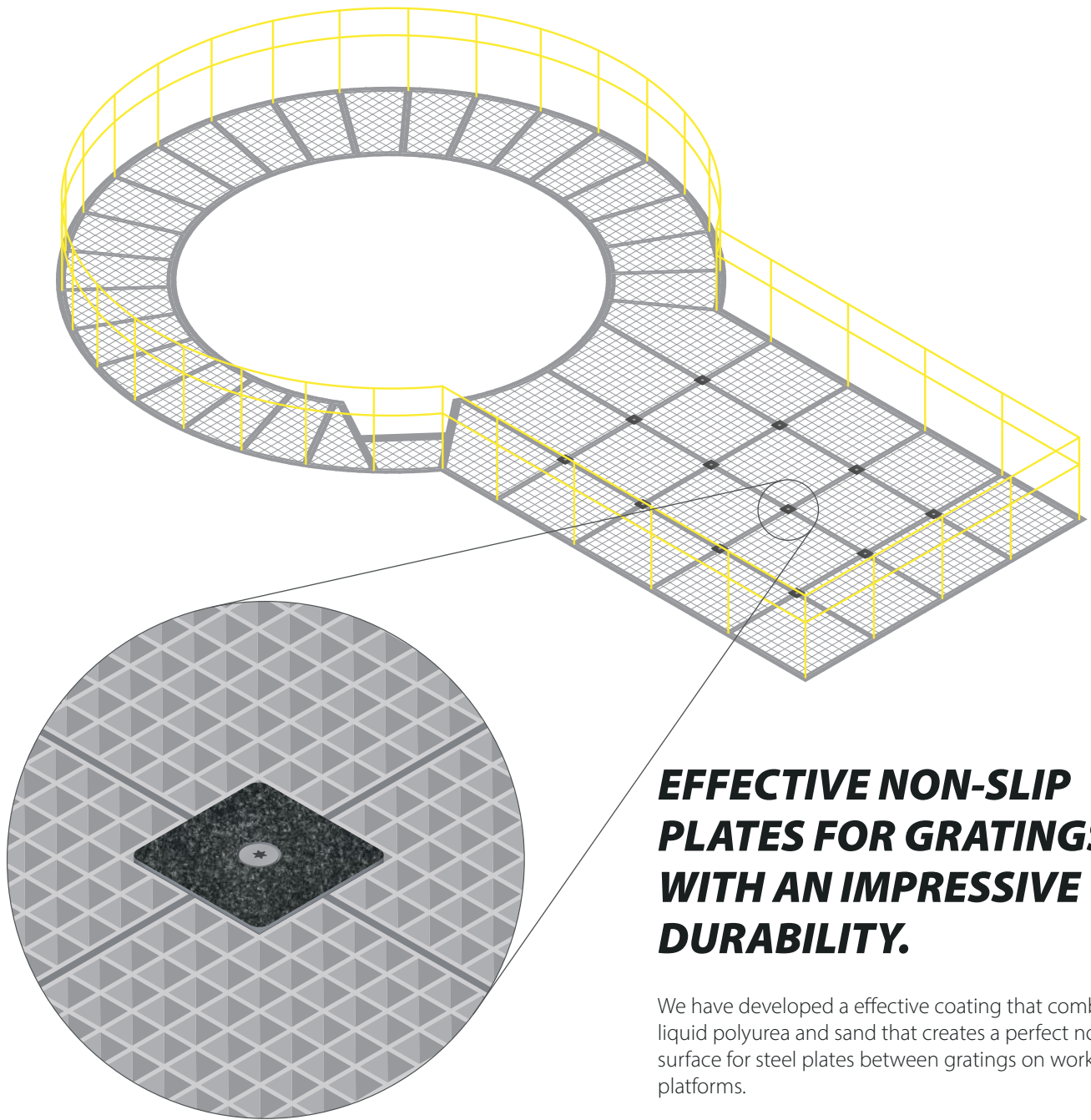
With our modern in-house production facilities, we can produce even the most complex contours in a high quality and uniformity.





***MAKE THE ASSEMBLY
EASY WITH LETTERS AND
NUMBERS.***

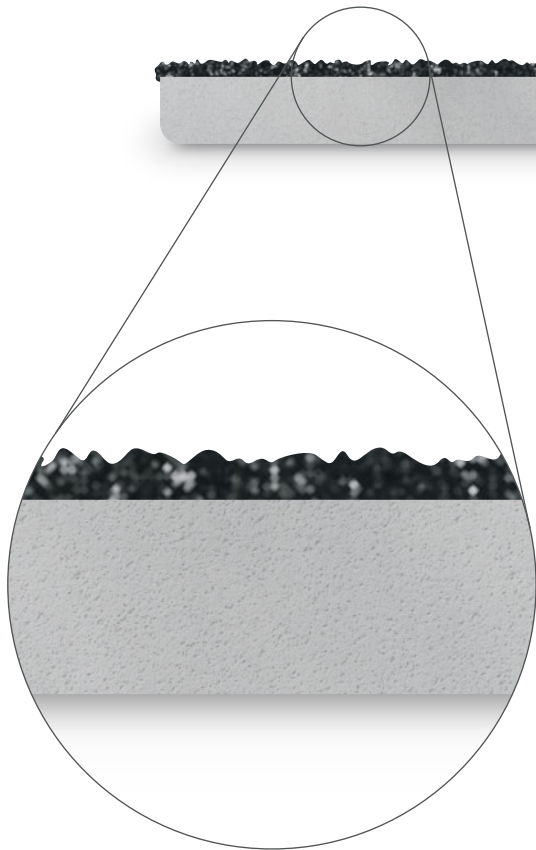
We can engrave our plastic items with letters and numbers to ensure an easy and correct assembly on the working platform.



***EFFECTIVE NON-SLIP
PLATES FOR GRATINGS.
WITH AN IMPRESSIVE
DURABILITY.***

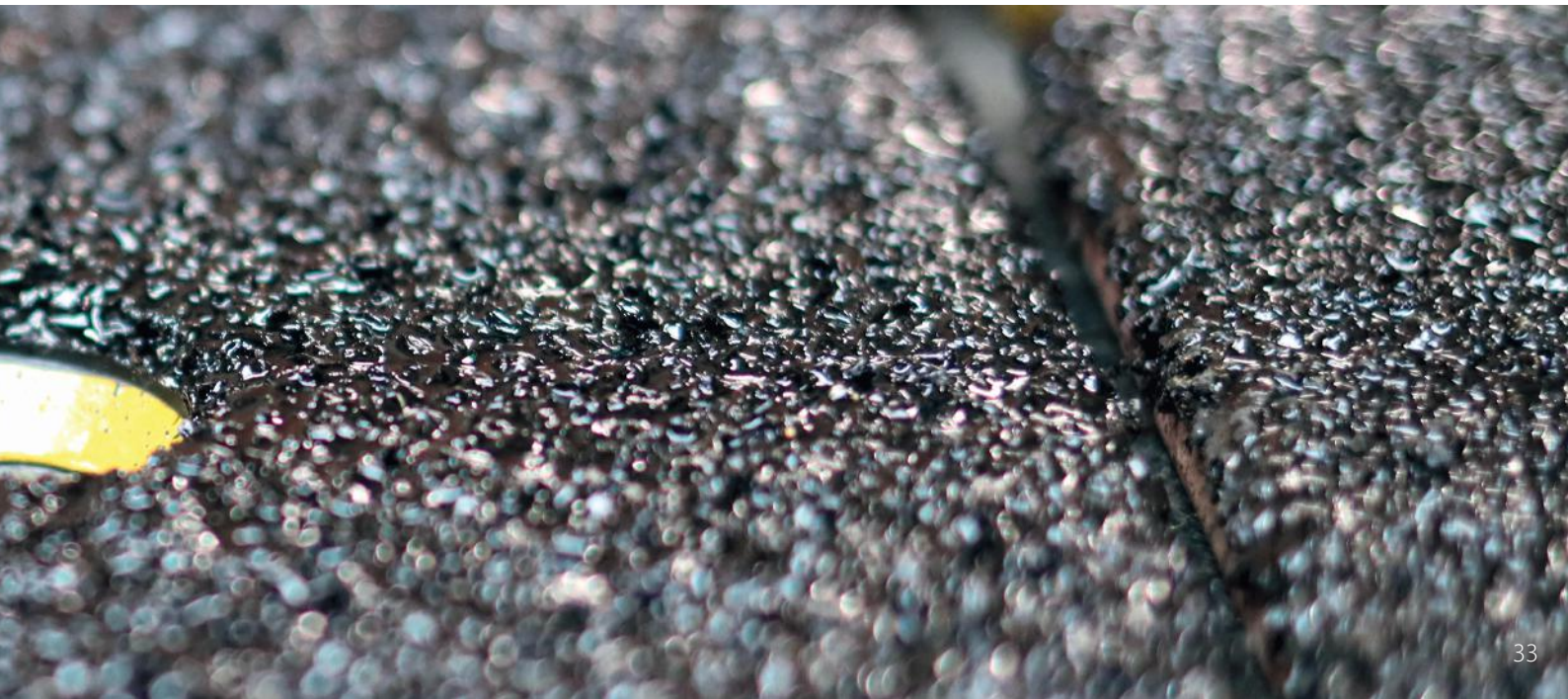
We have developed a effective coating that combines liquid polyurea and sand that creates a perfect non-slip surface for steel plates between gratings on working platforms.





IMPRESSIVE ATTACHMENT. OUTSTANDING DURABILITY.

Our coating is a combination of polyurethane and sand and provides an impressive strong attachment to the steel plate. Thanks to the strong attachment, our solution achieves an impressive durability that can withstand the harsh conditions in the offshore industry.





A WIDE RANGE OF SOLUTIONS IN MOLDED RUBBER.

Since 1983, RG ROM GUMMI has been engaged in rubber molding and is today among the largest and leading manufacturers of molded rubber solutions in Scandinavia. We therefore also mold rubber solutions for foundations, wind turbine towers, and nacelles.

Whether you need a solution that ensures stability and durability in foundations, reduces vibrations and noise in wind turbine towers, or protects and insulates vital components in nacelles from extreme weather conditions and mechanical stress, we can meet your requirements and needs.

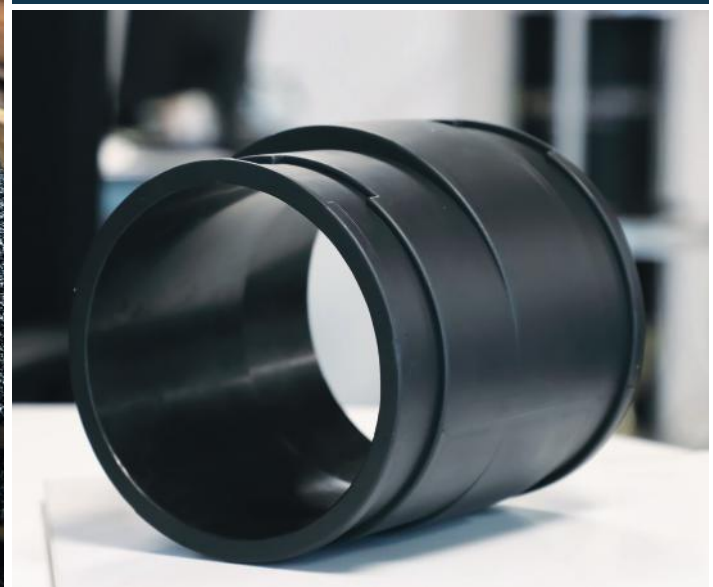
Our advanced production facilities and strict quality control procedures ensure that you always receive products that meet the highest standards.

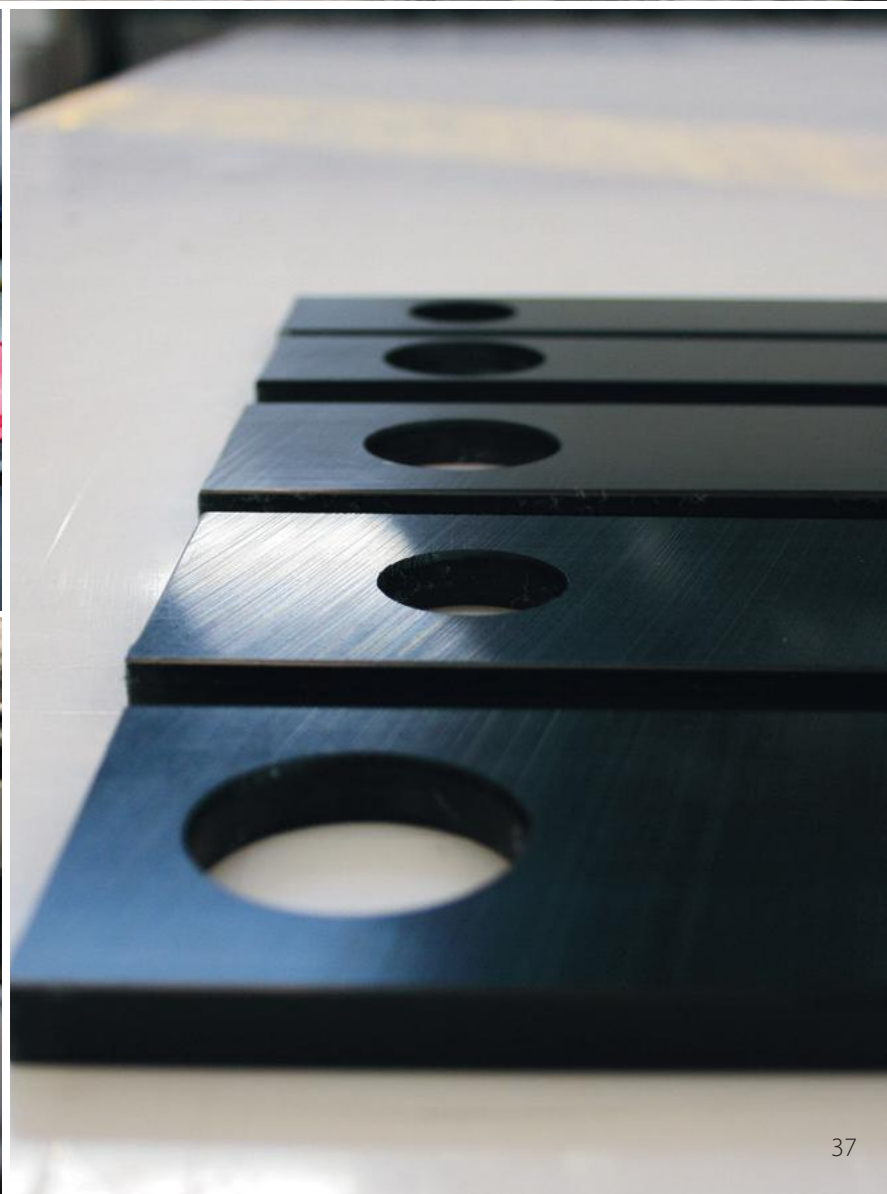




RG ROM GUMMI

**A FRACTION OF OUR
SOLUTIONS FOR
PROTECTION, SAFETY
AND NOISE REDUCTION.**







LEADING EXPERTISE. AN IMPRESSIVE TRACK-RECORD.

We are proud to be a world-leading manufacturer of custom solutions in rubber, plastic, and foam for wind turbines and offshore wind foundations. Since 2008, we have produced and delivered more than 5,000 foundations and wind turbines, distributed across 65 offshore and onshore wind farms.

HERE ARE SOME OF THE WIND FARMS WE HAVE SUPPLIED TO.

- Anholt (2013 - 111 foundations)
- Arcadis Ost (2021 - 1 foundation - OHVS)
- Arkona (2018 - 60 foundations)
- Baltic Eagle (2021 - 1 foundation - OHVS)
- Baltic Power (2024 - 2 Substations)
- Beatrice (2019 - 84 foundations)
- Borkum Riffgrund 1 (2015 - 78 foundations)
- Borkum Riffgrund 2 (2019 - 56 foundations)
- Borkum Riffgrund 3 (2023 - 83 foundations)
- Borssele 1+2 (2020 - 94 foundations)
- Borssele 3+4 (2020 - 77 foundations)
- Borssele 5 (2020 - 1 foundation)
- Burbo Bank Extension (2017 - 32 foundations)
- Butendiek (2015 - 80 foundations)
- Changfang and Xidao Offshore Wind Farm (2021 - 16 foundations)
- Changfang and Xidao Offshore Wind Farm (2022 - 46 foundations)
- Coastal Virginia (2021 - 2 foundations)
- CVOW Commercial (2024 - 176 foundations)
- Courseulles-sur-Mer (2022 - 64 foundations)
- Deutsche Bucht (2019 - 1 foundation)
- Dogger Bank A (2022 - 95 foundations)
- Dogger Bank B (2023 - 95 foundations)
- Dogger Bank C (2024 - 87 foundations)
- Empire Wind 1 (2024 - 54 foundations)
- EnBW Baltic 1 (2011 - 21 foundations)
- EnBW Baltic 2 (2015 - 80 foundations)
- Formosa II (2021 - 47 foundations)
- Galloper (2018 - 56 foundations)
- Gode Wind 1+2 (2017 - 97 foundations)
- Gode Wind 3 (2023 - 23 foundations)
- Gunfleet Sands - (2010 - 48 foundations)
- Gwynt y Môr (2015 - 160 foundations)
- Hollandse Kust Noord (2022 - 69 foundations)
- Hollandse Kust Zuid 1-4 (2021 - 140 foundations)
- Hollandse Kust West VI (2025 - 54 foundations)
- Horns Rev 2 (2009 - 91 foundations)
- Horns Rev 3 (2019 - 49 foundations)
- Hornsea 1 (2019 - 174 foundations)
- Hornsea 2 (2022 - 165 foundations)
- Inch Cape (2024 - Substation - OHVS)
- Kaskasi (2021 - 38 foundations)
- Kaskasi (2021 - 1 foundation)
- Kriegers Flak (2021 - 72 foundations)
- London Array (2013 - 175 foundations)
- Moray East (2021 - 100 foundations)
- Noirmoutier (2023 - 61 foundations)
- Nordergründe (2017 - 18 foundations)
- Norther (2019 - 44 foundations)
- Northwester 2 (2020 - 23 foundations)
- Northwester 2 (2020 - 1 foundation)
- NordSeeCluster (2024 - 44 foundations)
- Ocean Wind 1 (2023 - 98 foundations)
- Ocean Wind 1 (2023 - 3 foundation / substation)
- OstWind 3 Jacket Project (2 foundations)
- Revolution Wind (2024 - 1 foundation OSS)
- Saint Nazaire (2022 - 80 foundations)
- Sandbank (2017 - 72 foundations)
- Seamade (Mermaid) (2020 - 28 foundations)
- Seamade (Seastar) (2020 - 30 foundations)
- Sofia (2023 - 100 foundations)
- South Fork - (2023 - Substation)
- St. Brieuc (2021 - 1 foundation - OHVS)
- TetraSpar Demonstrator - Metcentre 2020 - 1 Floating foundation
- Thor (2024 - 72 foundations)
- Triton Knoll (2021 - 90 foundations)
- Veja Mate (2017 - 67 foundations)
- Vesterhav Nord/Syd (2023 - 41 foundations)
- Vineyard Wind 1 (2023 - 1 foundation / substation)
- Walney 1+2 (2012 - 102 foundations)
- Walney Extension (2018 - 87 foundations)
- West of Duddon Sands (2014 - 108 foundations)
- Westermost Rough (2015 - 35 foundations)
- Wikinger (2018 - 70 foundations)

RG ROM GUMMI