

Product Catalog 2024

Sealing Profiles Tailored for Your Company



Contents

	Our Sealing Profiles Guarantee a Tight Se	al!
	Continuous Product Development	
	and Recycling of Materials	
	Quality	
	Processing of Products and Waterjet Cutting 8	
	Materials 9	
	Measurements, Qualities, and Tolerances 10	
	Rubber parts	
	Colors	
12	Construction Industry	
	Glazing Seals	
	Wall Element Seals 14	
	Window and Door Frame Seals	
	Tape Seals for Window Glazing23	
	Tape Seats for William atazing	,
24	Vehicle and Ship Industry	
	Vehicle Frame Seals25	<u>,</u>
	Vehicle and Machine Seals26	j
	Rubber for Steel Band Mounting30)
	Buffers31	
	U- and P-rubbers32	
	Rectangular, Hoses, and Round Profiles 35)
76	Infracturations	
30	Infrastructure	
	Water and Drain Pipe Seals37	
	Flat Gaskets with Waterjet Cutting38	}











Our Sealing Profiles Guarantee a Tight Seal!

What do you need to seal? Does our catalog have a ready-made sealing product that suits your needs, or do you need a custom solution? Which raw material meets your requirements?

There are countless different purposes as well as different climatic and external demands. Luckily there's also a huge selection to choose from! Picking the right sealing profile and raw material depends on where you want to use it.

OT-Kumi has 35-years of experience of different sealing materials, sealing profile design and manufacturing. When we plan the best sealing solution together with our customer, we also share our knowledge and expertise.

This always results in a tight seal – which conserves energy!



"Special Seals and Sealing Profiles for Industrial and Construction, Car, and Ship Industries with 35 years of experience."

We are one of the leading seal profile manufacturers in Finland. We design and produce high-quality, custom seal profiles tailored to our customer's needs. Our production lines are modern and efficient – our facility has eleven profile manufacturing machines.

To ensure quality, precision, and delivery we manufacture the nozzles used in profile production ourselves. In our production, we use only tested and high-quality materials. Our operation complies with the ISO 9001:2015 quality standard requirements.



Janne Lahdenperä CEO

4 Product Catalog 2024 – OT-Kumi Oy Product Catalog 2024 – OT-Kumi Oy 5



We design our seals according to our customer's needs and intended use.

Continuous Product Development and Recycling of Materials

Most of our sealing profiles are originally designed to order and for precisely defined applications. Recently, the use of standard products has decreased, and efforts are made to find the best material solution for the profile's functionality.

Environmental values increasingly influence industrial raw material choices. This is why the proportion of environmentally friendly TPE has grown rapidly in recent years.

We at OT-Kumi have committedly invested in the product development of these profiles. We mainly manufacture 2- and 3-component combination profiles from this material. In multi-component profiles, the best features of different TPE materials (hard, elastic, cellular) can be combined to create a functional seal that is easy to install and optimal for sealing. We can also use different colors in the profiles. The use of hard material prevents stretching during installation and shrinkage over time.

Recycling

We are improving our operational efficiency by focusing on raw material recycling and quality management. Simultaneously, we are approaching important low-carbon goals both now and in the future.

We are developing a process where waste material generated in the production of rubber and plastic products is pulverized for recycling. Our goal is to create a process where nearly 100% of the waste material is recycled back into raw material and further returned to the material supplier for recycling into a new material batch. While we already recycle plastic on a small scale, the recycling process for rubber is still in the planning phase.

Quality

Our focus is customer satisfaction as well as the excellent management and control of our processes. We are working towards even better service of our customers by focusing on reliable delivery, and the organized processing and monitoring of returned products. We are continuously improving our quality control system according to our principle of continuous improvement.

Our New Quality Control System

Our quality system has been awarded the ISO 9001:2015 standard certification. We have established a quality system that covers our operations comprehensively from process development and documentation to analysis and monitoring.

We are committed to continuous improvement by our quality standards as well as operating principles. The certificate encompasses all our design and manufacturing processes for rubber, silicone, and TPE products.

Product Development is a Part of Our Everyday Operation

To serve our customers better and more efficiently, we are used to ongoing development of our services and production lines. This development is based on user experiences from different sealing materials and profiles. To ensure precision and reliable deliveries, we manufacture the nozzles for the sealing profiles ourselves.

We design most of our sealing profiles for specific and precisely defined applications, and, in our experience, collaboration with our customer's designers in the early stages of the design process leads to the best result.

Our goal is to find the best solution for every profile. It can be tightness, noise reduction, insulation capability, price, vibration reduction, or some visual detail. We manufacture the nozzles for the profiles by computer-controlled machinery – this is how we achieve excellent accuracy.

We are also looking into the use of 3D printing to perform simulations and tests in the production tool manufacturing phase.

Customer Satisfaction is Essential

Custom-made profiles tailored for our customers are our most important type of product. The profiles are designed and manufactured in cooperation with the customer to make the seal as tight as it needs to be. This allows us to provide a personal service to all our customers. Our goal is to establish a long-lasting, strong, and confidential relationship with our customers.

We measure the quality of our work with customer feedback and the realization of our production schedules. We carefully examine any found errors, and the risks and possibilities involved with our products meeting their requirements. Keeping customer satisfaction at an excellent level is our priority, so we always investigate ways we can improve our customer experience.

Sustainability and Responsibility

We choose our raw materials considering their impact on the environment. This is why we have also systematically invested in the development of recyclable TPE-profiles.

Our sealing profiles are made from rubber, TPE, or silicone. All materials we use are certified. We mainly use Finnish raw material, and we know what the material is made of and what is its point of origin. Our raw material suppliers comply to Reach and RoHS requirements.



6 Product Catalog 2024 – OT-Kumi Oy Product Catalog 2024 – OT-Kumi Oy **7**



Our waterjet cutter is perfect for work that requires extreme precision.

Processing of Products and Waterjet Cutting

In further processing, the sealing profile designed and manufactured according to the needs of our customers will be finalized into the desired shape, for example, as a hoop, a circle, or an angle. For processing purposes, we manufacture our own coupling molds to produce the desired shape.

Our waterjet cutting process is suitable for shaping rubber and other materials into mats and sheets, as well as perforating profiles, creating bevels, and performing other cutting tasks that require extremely high precision. Waterjet cutting is adaptable for the further processing of nearly all our materials, and the automated process significantly improves precision.

Waterjet Cutting in the Recycling Process

We are exploring the possibilities of waterjet cutting and its integration into our manufacturing and recycling processes. Waterjet cutting can be applied across various materials, and even very small waste materials can be used as new blanks in the production of components. This approach can save up to 80% more waste material compared to traditional cutting methods. According to our estimates, the annual amount of waste material would decrease from 50 tons to approximately 10 tons.

Using waterjet cutting also transforms the nature of work: the use of automation significantly reduces the workload. This facilitates the planning of work and shifts, allowing greater focus on the quality of the work itself.

Materials

We manufacture our sealing profiles from rubber, TPE, or silicone. We choose the material based on where the seal will be used and, for example, what kind of weather it's exposed to.

EPDM rubber

EPDM (ethylene propylene diene monomer) is the most common rubber compound used in



seals, and it can be used to produce massive components. It is a widely tested and well-known material, from which we have had very good user experiences in challenging conditions.

TPE

Thermoplastic elastomer is an advanced and totally recyclable raw material. It combines the properties of vulcanized



and thermoplastic rubbers. TPE provides a lot of possibilities for product design. We can manufacture the products with different levels of hardness.

TPE is highly resistant to chemicals excluding organic solvents and aromatic oils. It endures UV radiation and ozone well. It can be used in temperatures between -50 - +130 °C. TPE is also available in food safe quality.

The best features of different TPE materials (hard, elastic, cellular) can be combined to create a functional seal that is easy to install and optimal for sealing. Some TPE materials are also self-extinguishing and comply with the VO classification.

Silicone

Silicone is the most expensive raw material, but it has the best temperature resistance properties compared to other materials. Silicone has excellent resilience with stand mainture, prossure.



Silicone has excellent resilience, and it can withstand moisture, pressure, steam, various chemicals, and oils. Silicone also tolerates both sunlight and ozone and is a good insulator for electricity. We also have silicone that is UL 94 VO fire classified and fulfills the quality requirements of railway-use.

EPDM cellular rubber

EPDM cellular rubber has excellent cold and heat properties, as well as residual pressure and ageing qualities.

The material is water resistant and tolerates both ozone and UV-radiation.

Cellular rubber's closed cell structure is soft and resilient. The material can withstand temperatures between -55 - +100 °C.

NBR rubber

NBR (nitrite rubber) is one of the oldest synthetic rubbers. It was developed for conditions that require excellent resistance to oil. If the conditions are even more challenging, we can use Elarin rubber.



8 Product Catalog 2024 – OT-Kumi Oy Product Catalog 2024 – OT-Kumi Oy 9

Measurements, Qualities, and Tolerances

Rubber Product Tolerances

Tolerance tables are according to the ISO 3302 standard. Different tolerance guides can be applied to products with varying measurements. Extruded rubber expands as it passes through the die and after vulcanization it changes shape and shrinks. The expansion and shrinkage factors depend upon the rubber type and the quality of the mixture. Products made from soft rubber require greater tolerances than those made from harder qualities.

	Diameter tolerances								
Basic Classification measurement E1 E2 E3 E4									
mm		mm	± mm	± mm	± mm	± mm			
0	-	≤ 2,5	0,20	0,35	0,50	0,80			
2,5	-	≤ 4,0	0,25	0,40	0,70	1,00			
4,0	-	≤ 6,3	0,35	0,50	0,80	1,30			
6,3	-	≤ 10	0,40	0,70	1,00	1,60			
10	-	≤ 16	0,50	0,80	1,30	2,00			
16	-	≤ 25	0,70	1,00	1,60	2,50			
25	-	≤ 40	0,80	1,30	2,00	3,20			
40	-	≤ 63	-	1,60	2,50	4,00			
63	-	≤ 100	-	2,00	3,20	5,00			

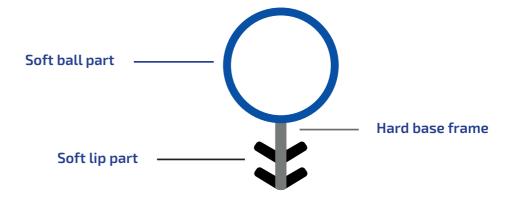
Cut length tolerances								
Basic measu	ıron	nent	Classification					
measu	11 61	ileiit	L1	L2	L3	L4		
mm		mm	± mm	± mm	± mm	± mm		
0	-	≤ 40	0,7	1,0	1,6	3,2		
40	-	≤ 63	8,0	1,3	2,0	4,0		
63	-	≤ 100	1,0	1,6	2,5	5,0		
100	-	≤ 160	1,3	2,0	3,2	6,3		
160	-	≤ 250	1,6	2,5	4,0	10,0		
250	-	≤ 400	2,0	3,2	5,0	12,5		
400	-	≤ 630	2,5	4,0	6,3	16,0		
630	-	≤1000	3,2	5,0	10,0	20,0		
1000	-	≤1600	4,0	6,3	12,5	25,0		
1600	-	≤ 2 500	5,0	10,0	16,0	32,0		
2 500	-	≤ 4 000	6,3	12,5	20,0	40,0		
		< 4 000	±0,16%	±0,32%	±0,5%	±1,0%		

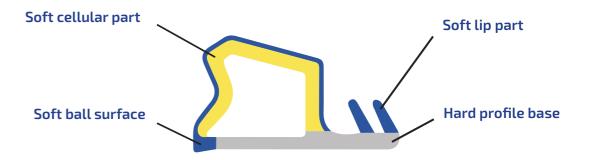
Cellular rubber strips

	Diameter tolerances						
Basic Classification measurement E1 E2 E3							
mm		mm	± mm	± mm	± mm		
0	-	≤ 2,5	0,35	0,50	0,80		
2,5	-	≤ 4	0,40	0,70	1,00		
4,0	-	≤ 6,3	0,50	0,80	1,30		
6,3	-	≤ 10	0,70	1,00	1,60		
10	-	≤ 16	0,80	1,30	2,00		
16	-	≤ 25	1,00	1,60	2,50		
25	-	≤ 40	1,30	2,00	3,20		
40	-	≤ 63	1,60	2,50	4,00		
63	-	≤ 100	2,00	3,20	5,00		

Cut length tolerances								
Basic Classification								
measu	ren	nent	L1	L2	L3			
mm mm			± mm	± mm	± mm			
0	-	≤ 40	1,0	1,6	3,2			
40	-	≤ 63	1,3	2,0	4,0			
63	-	≤ 100	1,6	2,5	5,0			
100	-	≤ 160	2,0	3,2	6,3			
160	-	≤ 250	2,5	4,0	10,0			
250	-	≤ 400	3,2	5,0	12,5			
400	-	≤ 630	4,0	6,3	16,0			
630	-	≤1000	5,0	10,0	20,0			
1000	-	≤1600	6,3	12,5	25,0			
1600	-	≤ 2 500	10,0	16,0	32,0			
2 500	-	≤ 4 000	12,5	20,0	40,0			
		< 4 000	±0,32%	±0,50%	±1,00%			

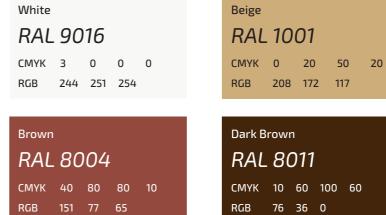
Rubber parts





Colors

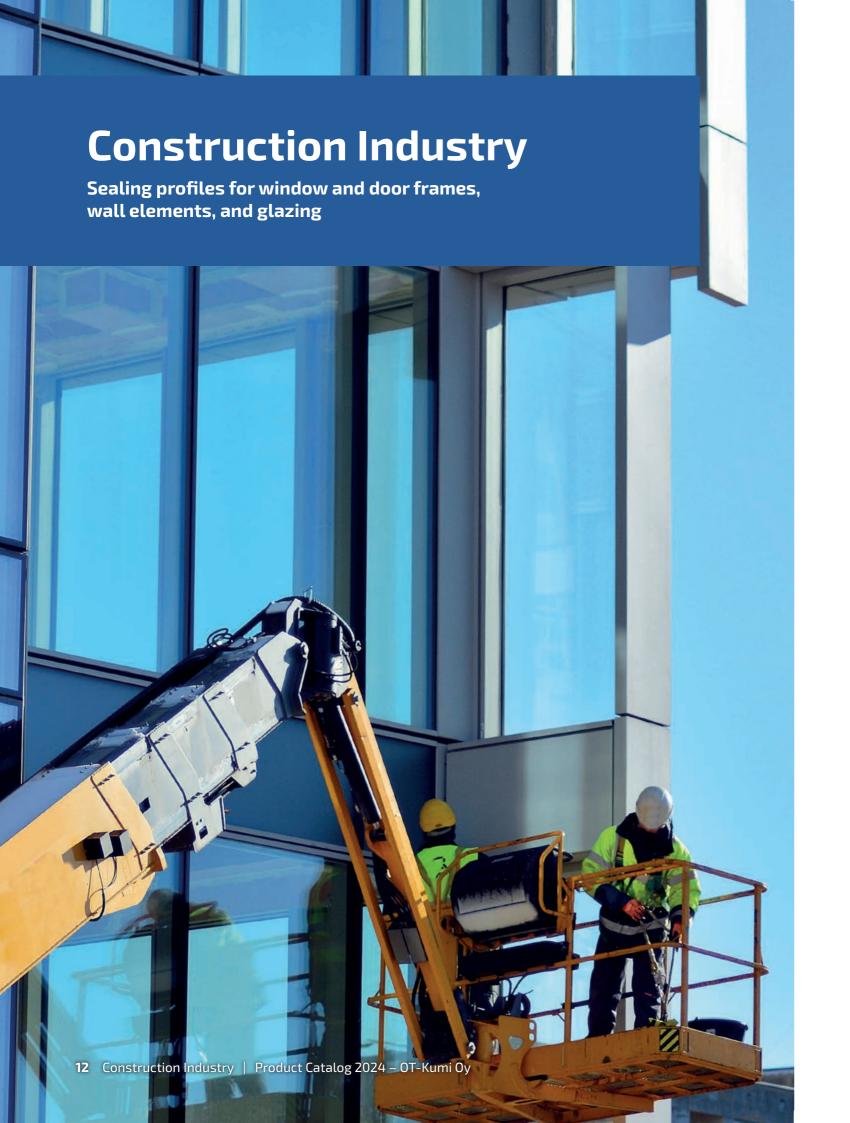
We can also manufacture seals in different colors according to your needs. Standard colors for TPE seals are white, beige, brown, grey, and black, but we also supply other colors upon request. EPDM and NBR rubber materials are only available in black. Ask more about our color selection!



Gray							
RAL 7040							
СМҮК	20	5	10	40			
RGB	134	148	151				

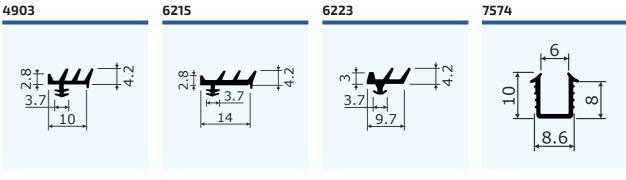
Black								
RAL 9017								
СМҮК	100	90	100	95				
RGB	0	0	0					

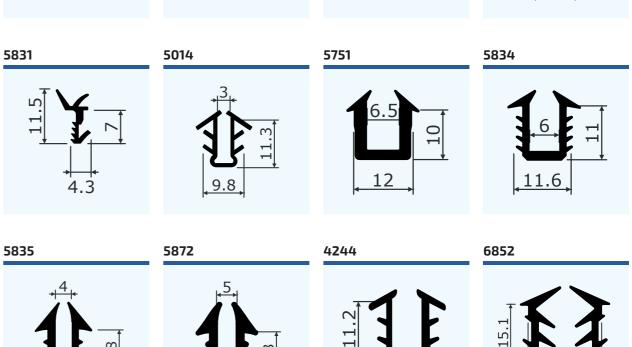
Examples of RAL color chart. There are several different shades available for gray.

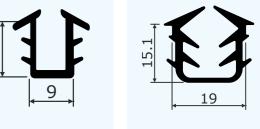


Glazing Seals

We offer seals according to different systems for various applications in the construction industry. Our glazing seals suit all your glazing needs.

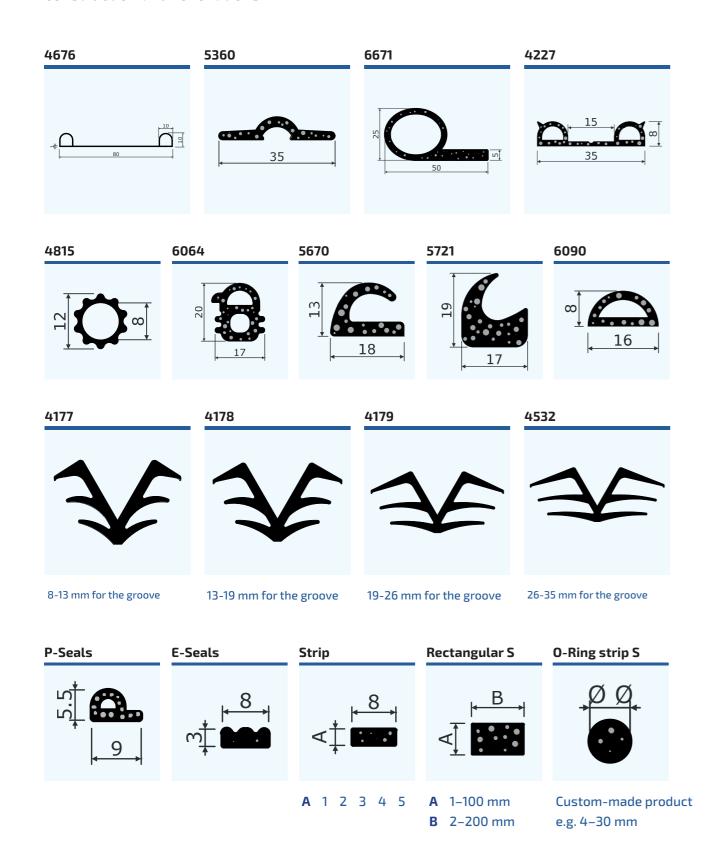


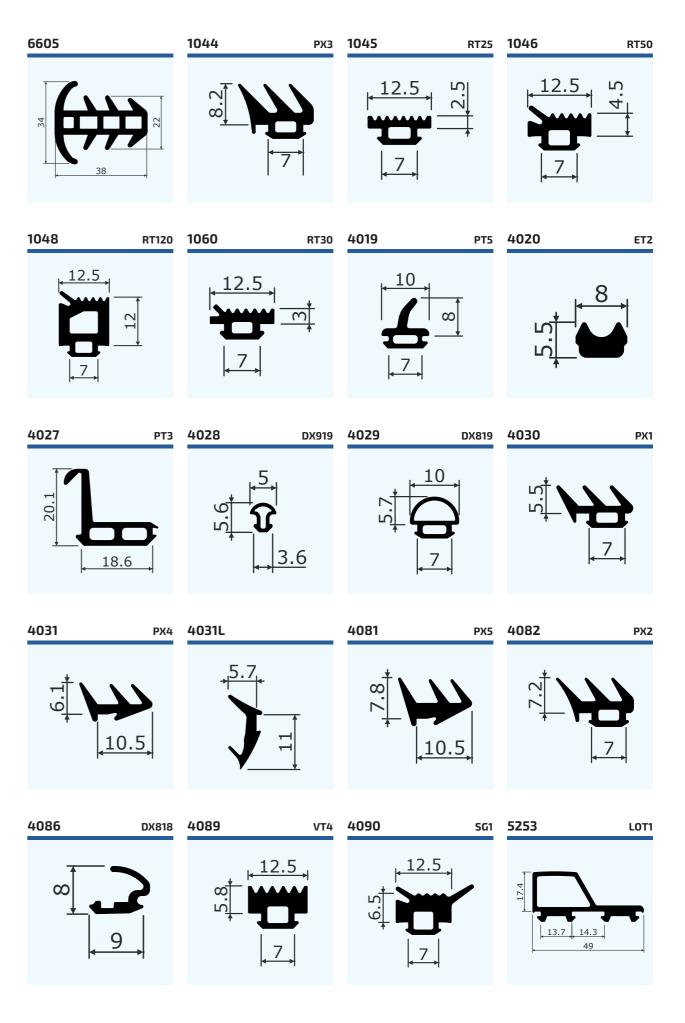




Wall Element Seals

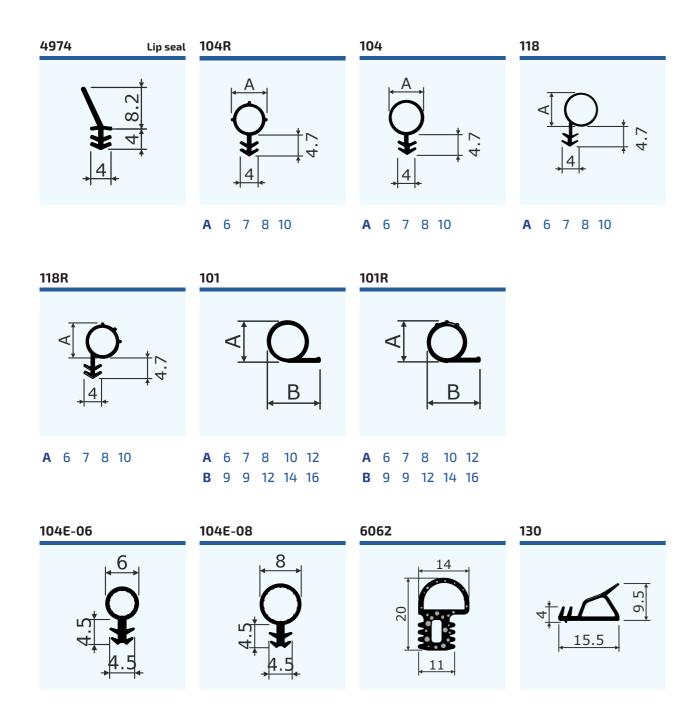
We offer seals according to different systems for various applications in the construction industry. Our wall element seals are suitable for both new construction and renovations.

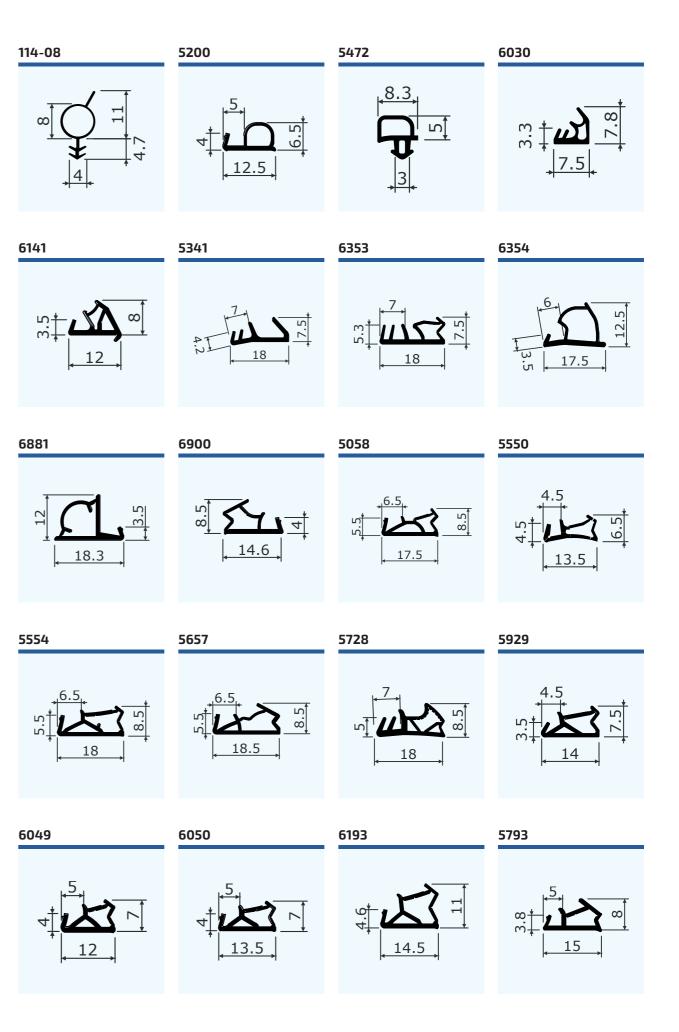


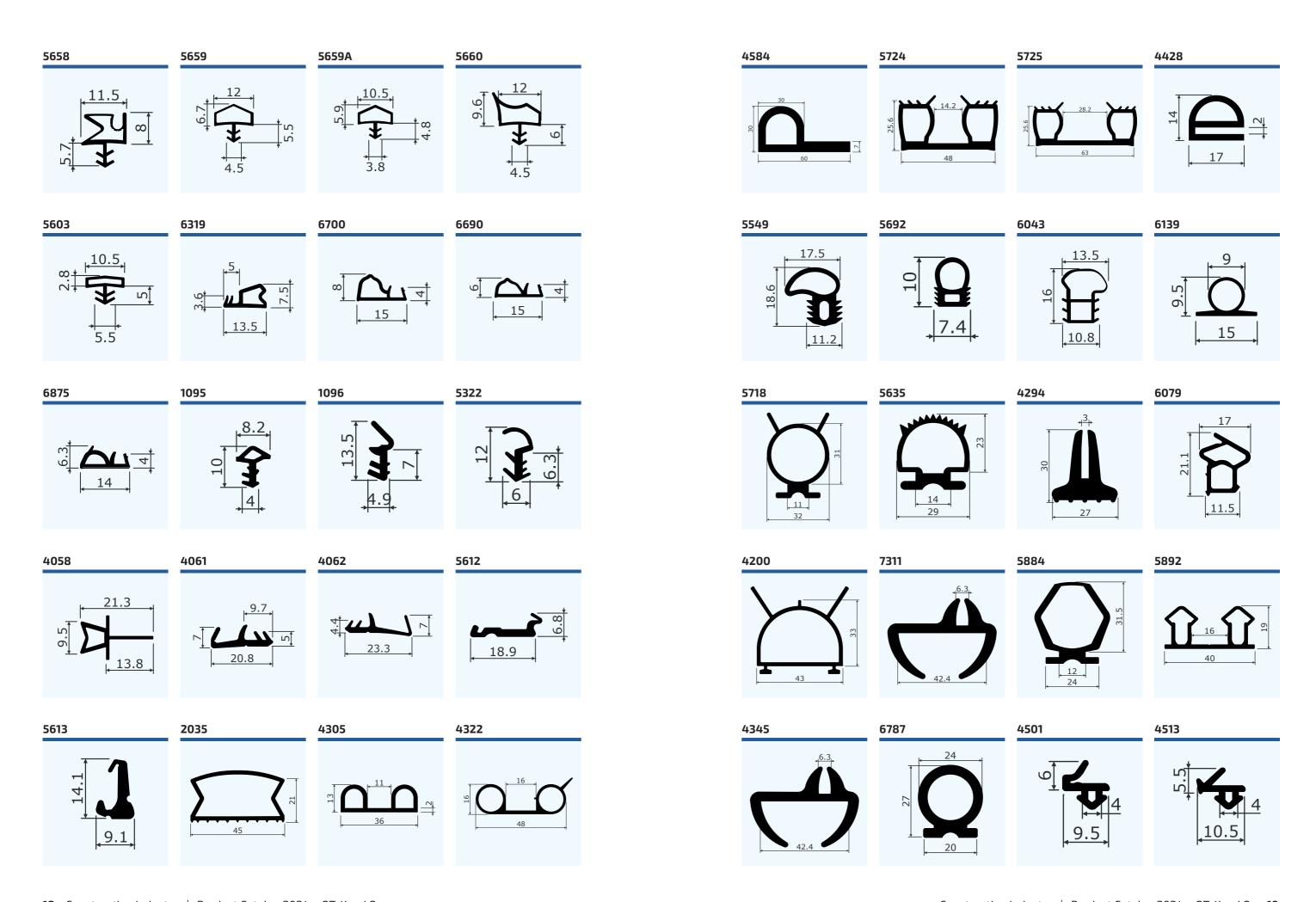


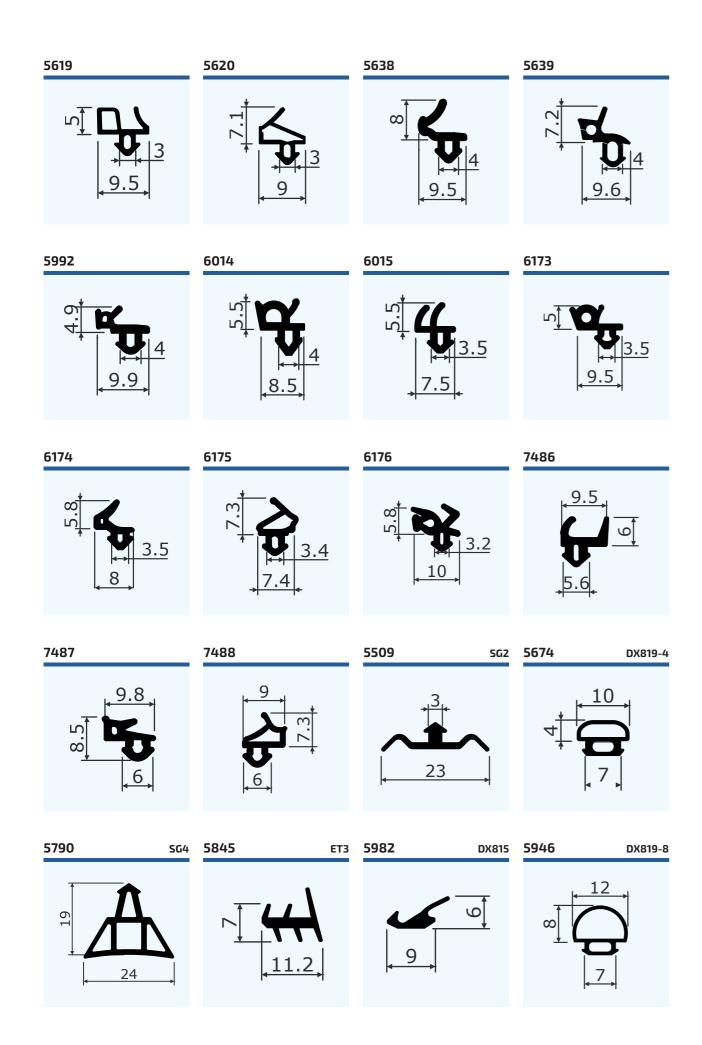
Window and Door Frame Seals

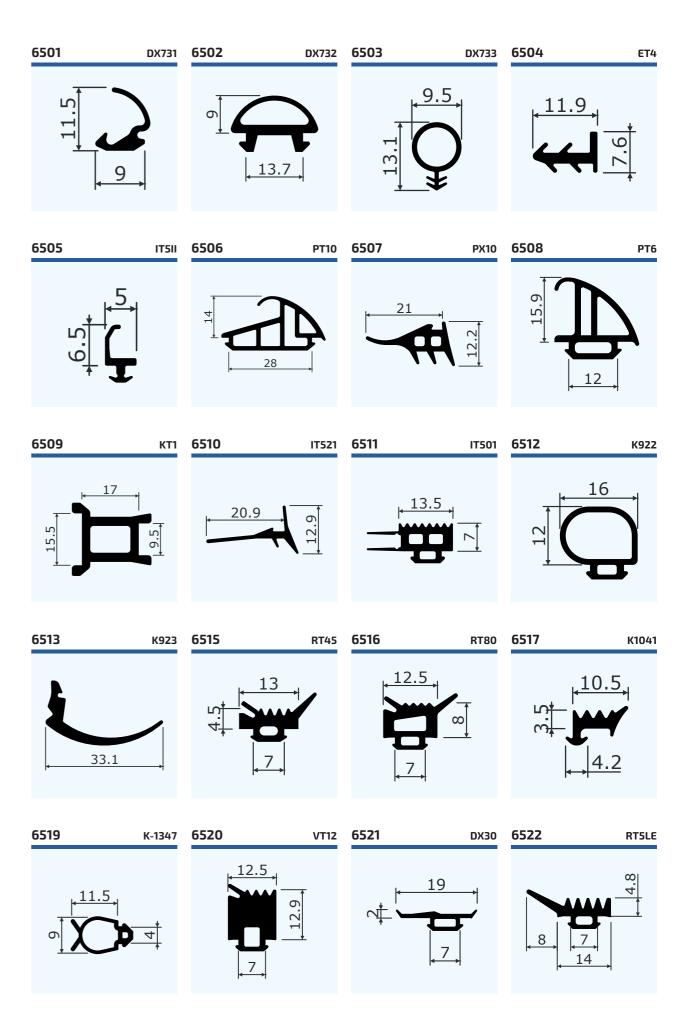
We offer seals according to different systems for various applications in the construction industry. Our window and door frame seals are suitable for various wooden frames and aluminum structures.

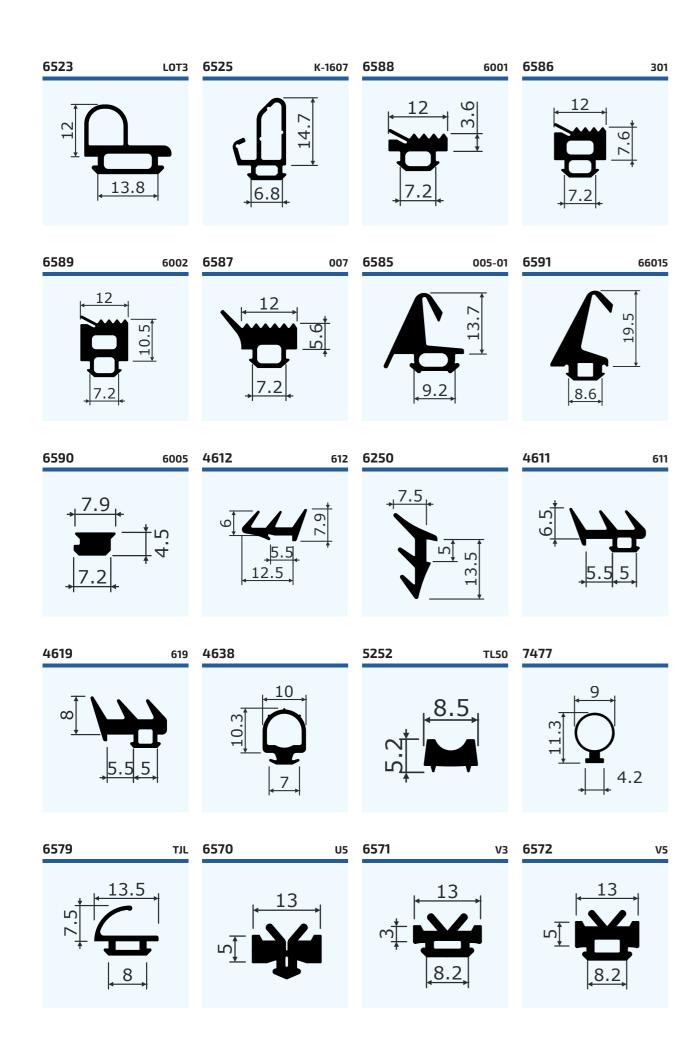


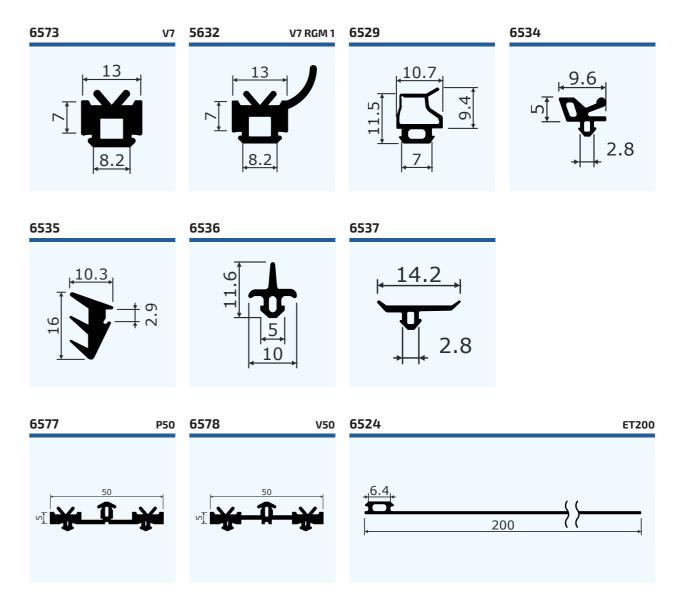






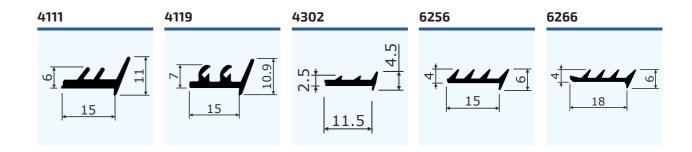






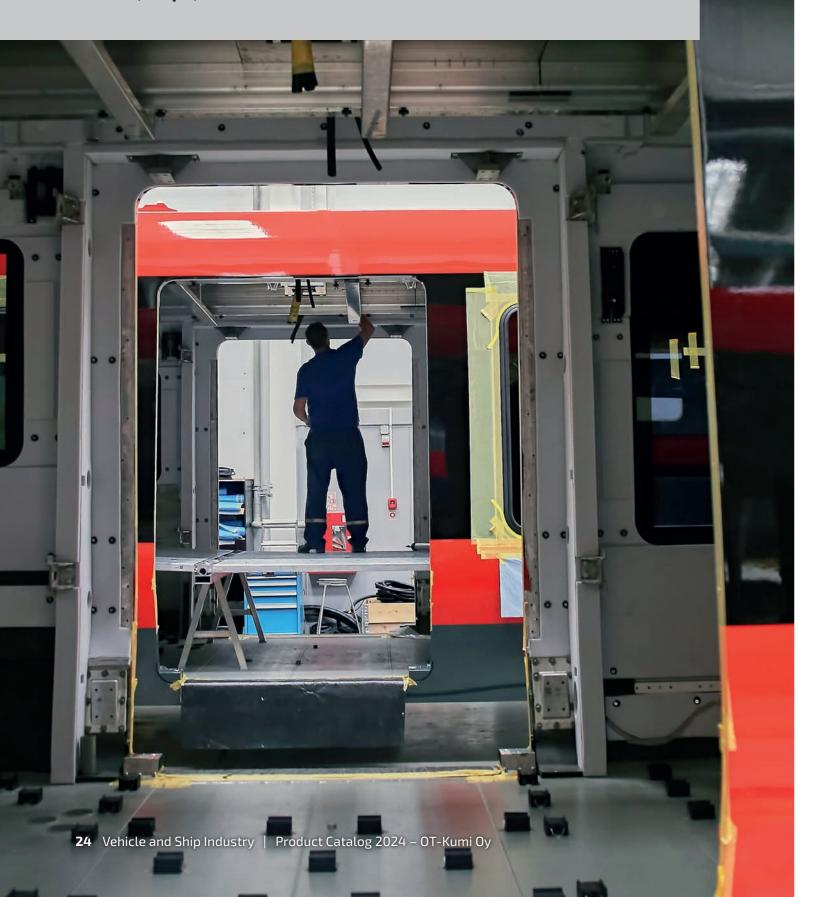
Tape Seals for Window Glazing

We offer seals according to different systems for various applications in the construction industry. Our tape seals are suitable for all sorts of purposes from glazing to glass roofs.



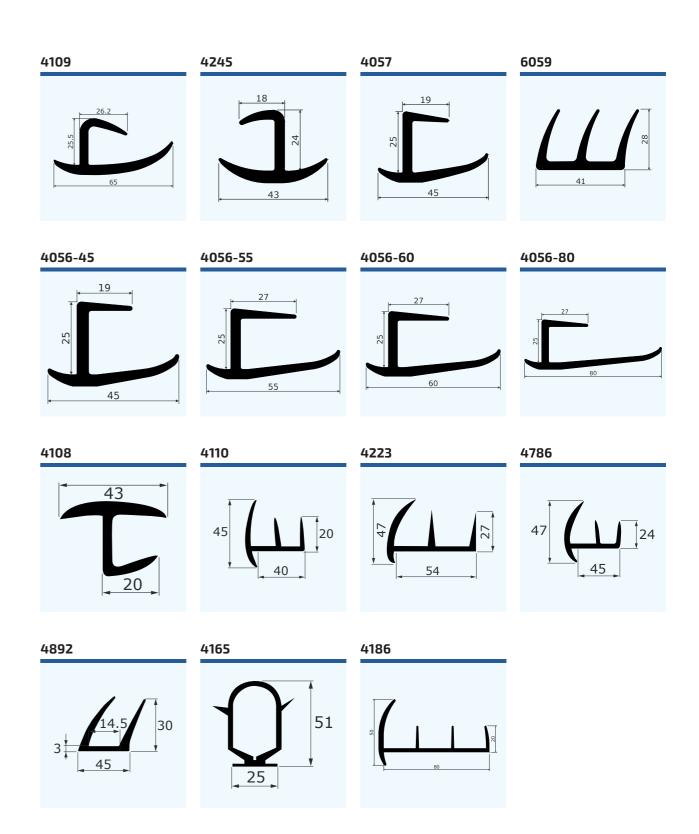
Vehicle and Ship Industry

Sealing profiles for machinery, train carriages, boats, ships, and vehicles



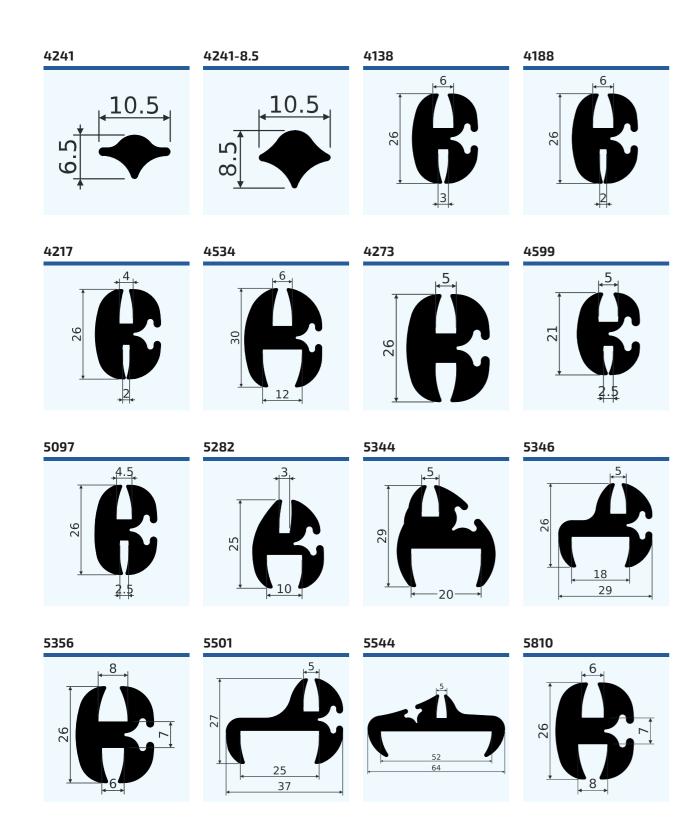
Vehicle Frame Seals

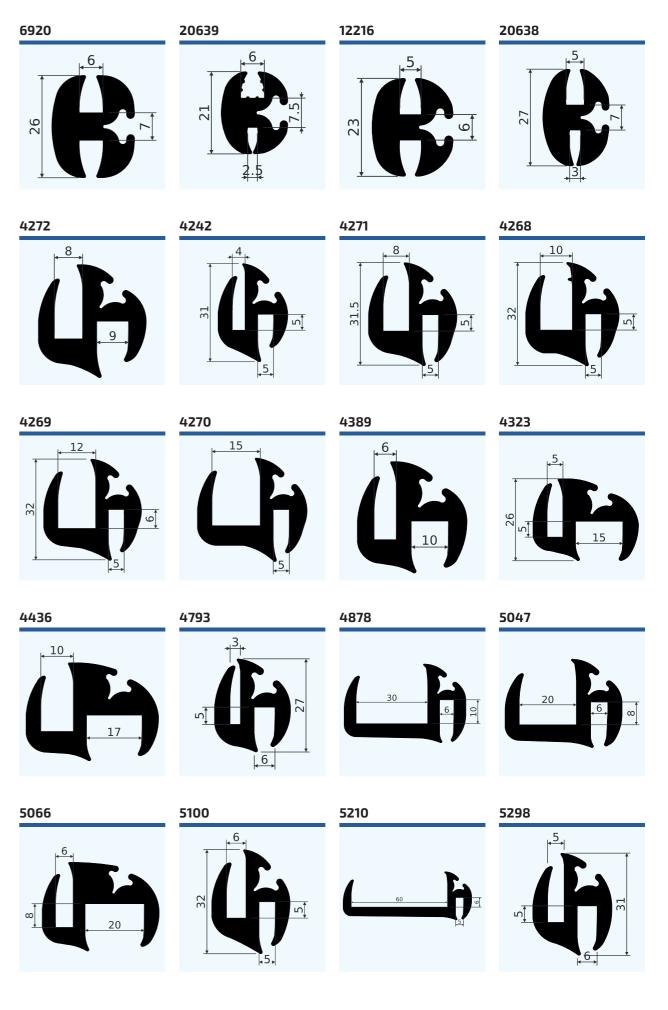
Our range includes seals and sealing profiles for a wide range of applications in the vehicle industry. We deliver flexibly and promptly, whether you need profiles for small batches or large volumes.



Vehicle and Machine Seals

Our range includes seals and sealing profiles for a wide range of applications in the vehicle industry. We deliver flexibly and promptly, whether you need profiles for small batches or large volumes.





Couldn't find the right seal for you?

No worries! We can design and manufacture seals and sealing profiles tailored to your company's unique requirements. We have over 35 years of experience in specialized and challenging sealing applications, so we know to choose just the right shape and material to ensure a reliable seal. We can deliver both small and large quantities of customized seals.

We create a seal tailored to your needs, no matter how unique they are. What do you want to seal?

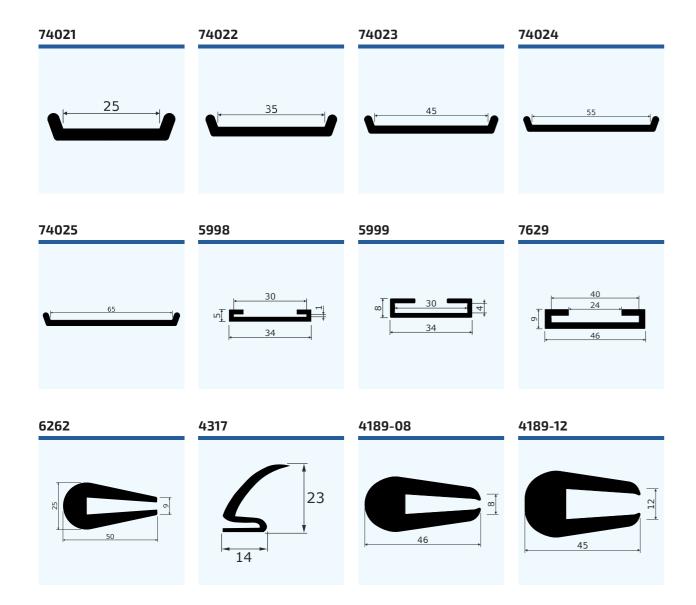
Tell us what kind of seal you need!

Contact us



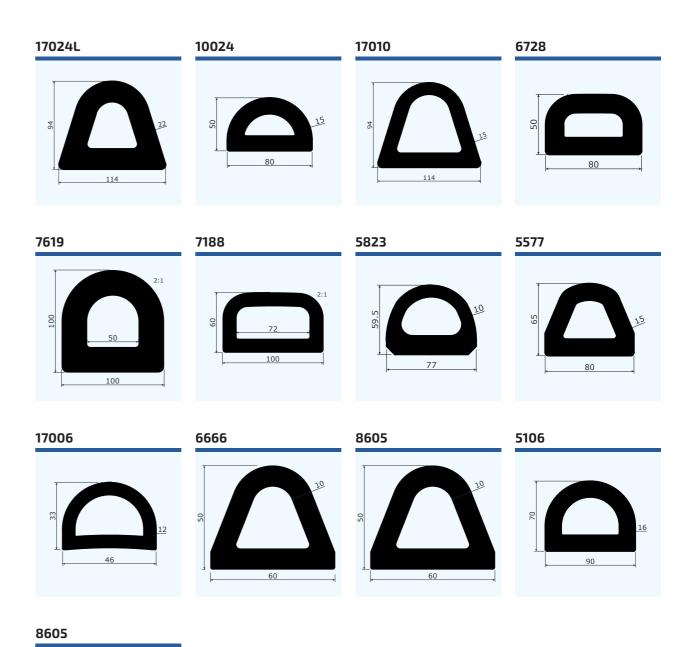
Rubber for Steel Band Mounting

Our range includes seals and sealing profiles for a wide range of applications in the vehicle industry. We deliver flexibly and promptly, whether you need profiles for small batches or large volumes.

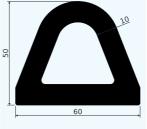


Buffers

Our range includes seals and sealing profiles for a wide range of applications in the vehicle industry. We deliver flexibly and promptly, whether you need profiles for small batches or large volumes.

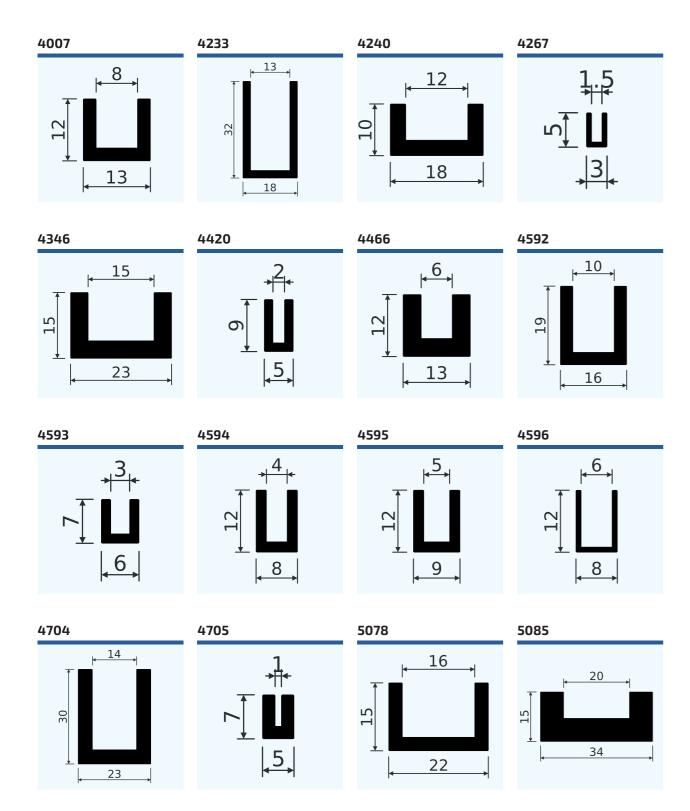


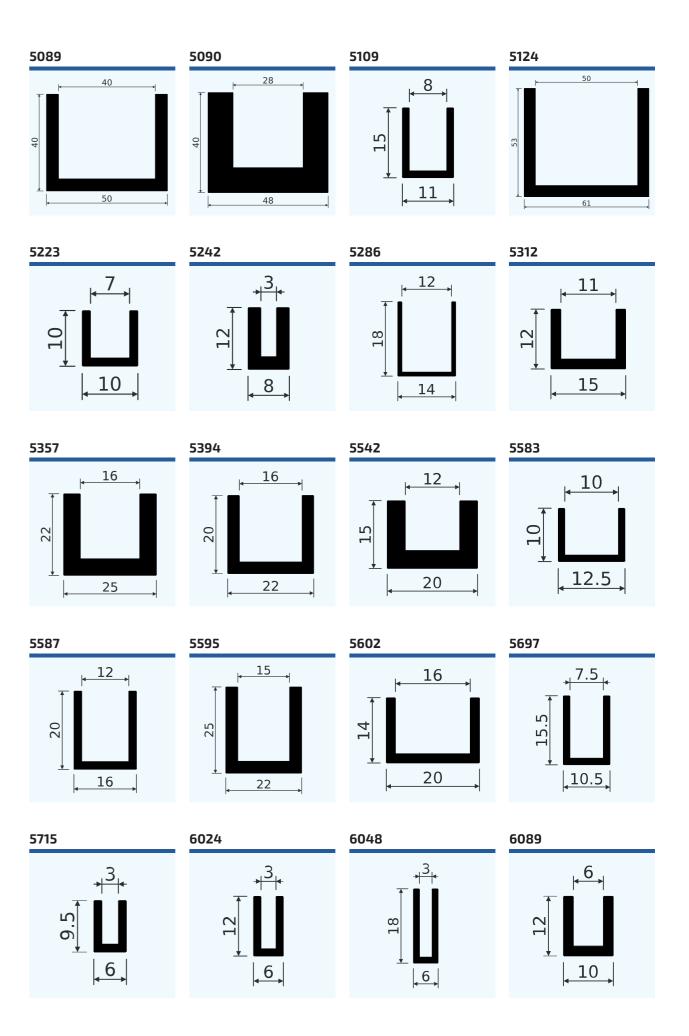


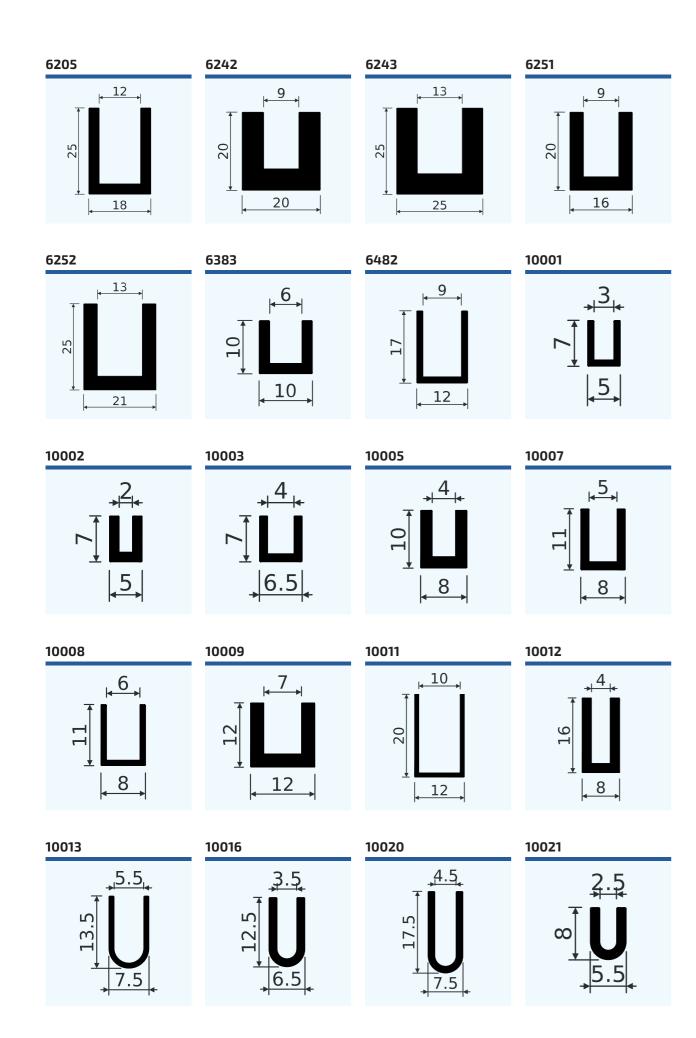


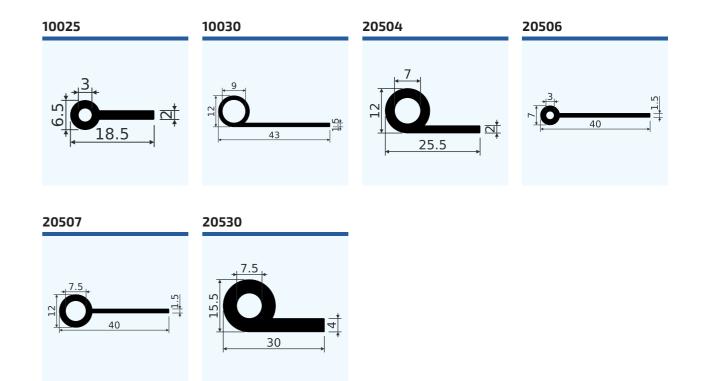
U- and P-rubbers

Our range includes seals and sealing profiles for a wide range of applications in the vehicle industry. We deliver flexibly and promptly, whether you need profiles for small batches or large volumes.



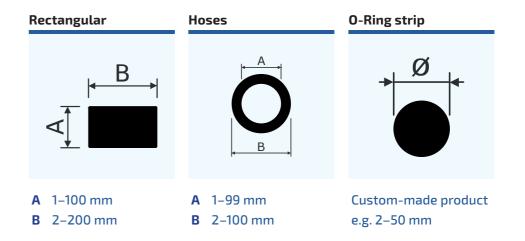


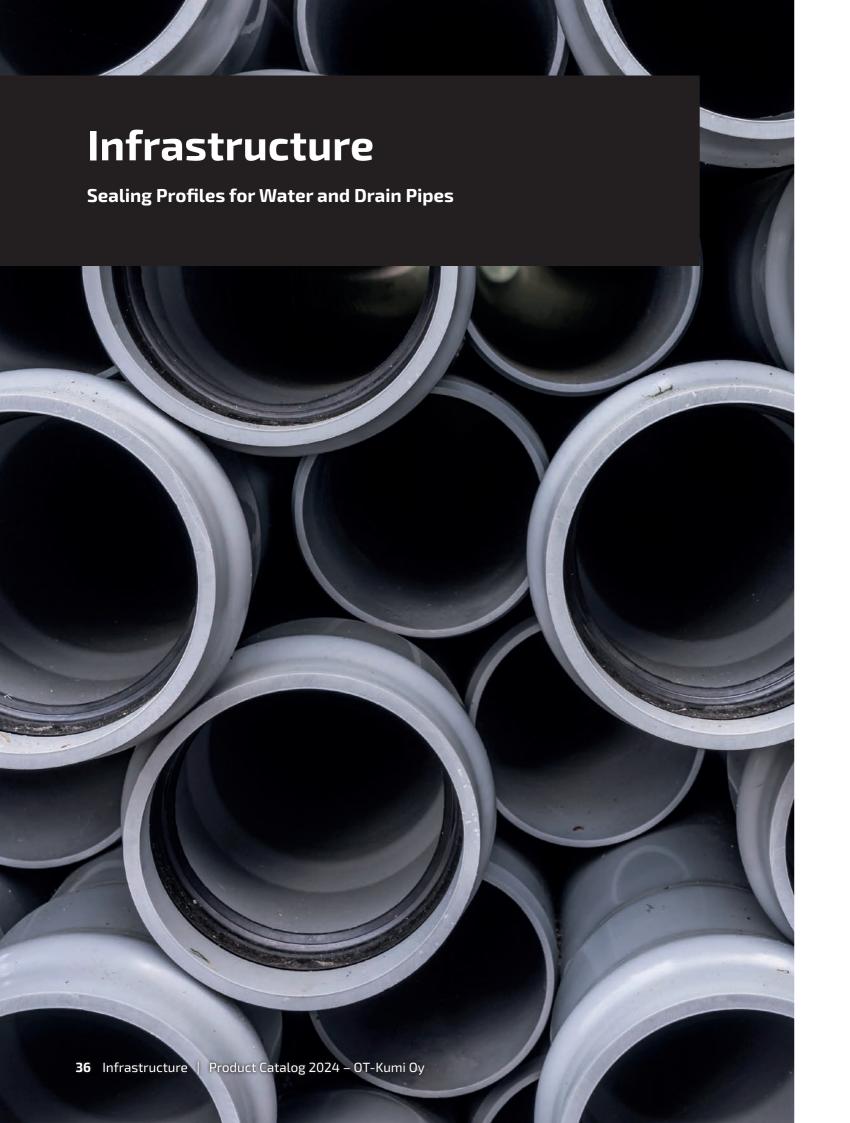




Rectangular, Hoses, and Round Profiles

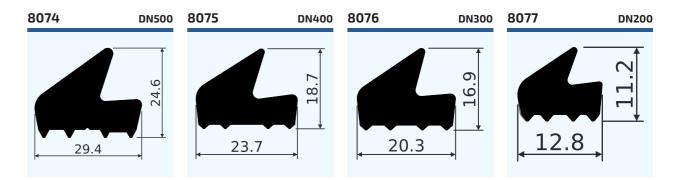
We manufacture rectangular profiles, hoses, and round profiles for industrial purposes. Sizes are always customized precisely according to customer dimensions.

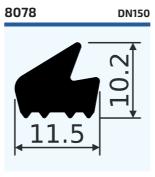




Water and Drain Pipe Seals

We offer sealing solutions for infrastructure, especially for the joints of water and sewer pipes, as well as for wells. Our high-quality seals ensure long-term functionality and a tight structure.





Flat Gaskets with Waterjet Cutting

We offer precision-cut flat gaskets for various applications. Our high-quality seals ensure long-term functionality and a tight structure.

Please ask for a quote!







Quality from Northern Finland

www.ot-kumi.com/en



+358 8 655 8800 sales@ot-kumi.com



Lieksentie 8, 91100 Ii, Finland



facebook.com/otkumi linkedin.com/ot-kumi-ltd