

igus® dry-tech® bearings ... don't lubricate

iglidur® ...



plastics for longer life® ... igus®

on tour

www.iglidur.eu/30 ...

Around the world with polymer plain bearings from igus®:

A small car goes on a big journey

Triboplastics – perspectives for the automotive industry

For 30 years, the plastics specialist, igus®, headquartered in Cologne Germany, has been committed to the research, development and continual optimisation of tribopolymers for industrial applications under the iglidur® brand. With over 12,000 products, igus® offers the world's largest range of friction-optimised polymer plain bearings. Consequently, through its 46 iglidur® series materials the enterprise is a top-tier partner for plastics in motion applications, the "motion plastics®". igus® has successfully established itself as a competent supplier to the automotive industry; today one of every two igus® plain bearings is used in automobiles. From seat and convertible top systems to multi-link hinges and components in the engine compartment, extending to applications in the chassis – the areas of application for polymer plain bearings in vehicles are extremely diverse.

The practical test: A trip around the world



To mark the 30th anniversary of iglidur® bearings, igus® set out on an adventurous round-the-world trip to demonstrate the high performance of its plastic products. A compact car was retrofitted with iglidur® plastic components and set forth on a global expedition under the motto "igidur® on tour". The journey extended across four continents and three oceans; mile upon mile of asphalt, gravel, dirt and mud through rain, searing heat and snow.

At blog.igus.eu/igidurontour
facebook.de/igusDE

you can follow the tour. Reports, videos and photos provide exciting insights into the "igidur® on tour" journey.



First-time fitting with iglidur® components

Step #1: The big conversion

At the Cologne University of Applied Sciences students worked on making the vehicle fit for the trip. Over the course of four weeks various parts were replaced by igus® parts.

Our car for "igidur® on tour" laid bare!

In the four weeks of conversion the small car was turned completely inside out. For us the inner values also count! Consequently, the first step was to jack up the car and lower the engine. Simultaneously the modules that had already dismantled were closely examined. Together with the German Technical Control Association (TÜV), igus® employees worked out which parts were allowed to be replaced.

Before the car could start its big tour in January, bearing points had been replaced in the following areas:

- adjustable seating systems
- brake pedal
- gearshift
- parking brake
- window lifters
- convertible roof pivot points
- windscreen wipers
- throttle valves
- alternator

All in all 56 igus® bearings were installed.

igus® advantages:

- Weight
(7x lighter than metal)
- Low-cost
- Individual moulding

To avoid risking the TÜV approval, it was not possible to retrofit safety or crash-related applications in our small car. These particularly include all applications in the chassis, brake system and steering, but also in the hinges and seat systems. igus® polymer plain bearings can generally be used in automobiles and many other applications and are ideal for replacing metal plain bearings and roller bearings, particularly from a weight perspective.





Step #2: Cologne – final preparations

9 January was a crucial day for the conversion team at the Cologne University of Applied Sciences and igus®: TÜV inspected the converted vehicle. The keenly anticipated message came after an exhaustive inspection: The certification was issued and the tour could get under way.

The official send-off was celebrated at a major press event in the new factory building in Cologne. 50 journalists gathered detailed information about the replaced bearing locations and the tour. A live video feed to the colleagues in the tour's first destination country, India, provided an impression of what our vehicle would have to contend with.

Then, directly from Cologne, the car's first trip with our tour guide, Sascha, was to the Frankfurt/Main airport; from Frankfurt the car was flown directly to New Delhi/India the next day.



After the press event in Cologne, the trip proceeded directly to the Frankfurt airport.



Our colleagues in India presented the tour itinerary in India in a live video feed.



The TÜV conducted an exhaustive inspection on all converted bearing locations.



Directly after arriving in Frankfurt, the car was cleared through customs.



On German soil, for what would be the last time for awhile. The small car shortly before being loaded into the airplane.



It only took a few minutes, and our little car had disappeared into the belly of the enormous aircraft.



50 journalists and many other guests followed the call to Cologne and were in attendance when the car was sent on off on its big trip.

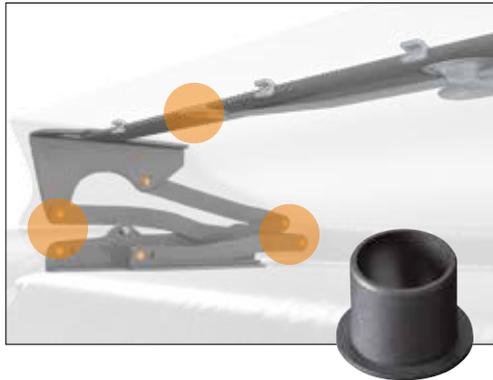
Where igus® can be found in the car ...



Seat systems – adjustment / adjusting lever

iglidur® J replaces lubricated plastic bearing made of POM

- Noise-free operation
- Simple, captive assembly
- Minimal bearing clearance due to tolerance compensation in the cathodic dip coating process.
- Tolerance compensation in the cathodic dip coating process
- Also runs on simple, cold-extruded parts/tubes
- Lubricant-free



Convertible top – operation and closure

iglidur® G replaces lubricated, fibreglass-filled PA6 polyamide bearings and metallic plain bearings

- Corrosion-free
- Also runs on cold extruded parts
- Low bearing clearance due to tolerance compensation in the cathodic dip coating process
- Simple, captive assembly
- High compressive strength
- Lubricant-free



Hand brake – handbrake lever

iglidur® G replaces lubricated steel-steel-mount without bushing

- No rattling
- Silent operation
- Easy assembly
- Lubricant-free

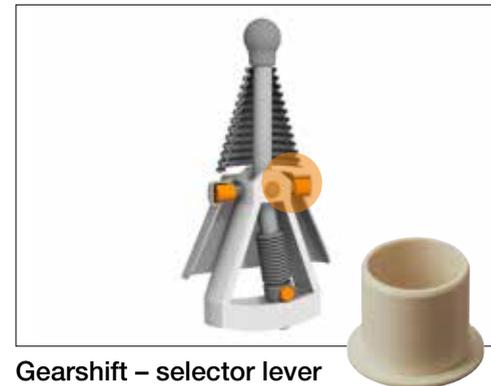
... and why?



Pedals – brake pedal

iglidur® G replaces lubricated, fibreglass-filled PA6 polyamide bearings

- Rattle-free
- Noise dampening
- Tolerance compensation through radial camber
- Lubricant-free



Gearshift – selector lever

iglidur® P210 replaces lubricated plastic and steel bushings

- Also runs against fibre-reinforced plastics
- Low bearing clearance
- Pleasant haptics
- Lubricant-free



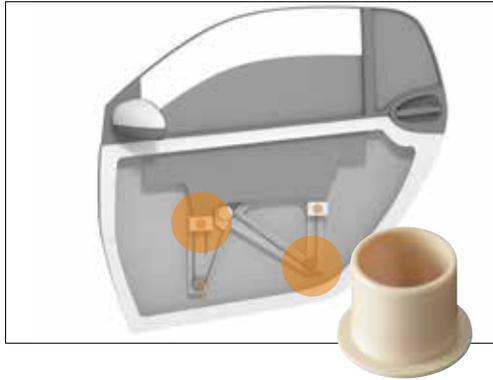
igus® advantages

- Weight (7x lighter than metal)
- Low-cost
- Individual moulding



Where igus® can be found in the car ...

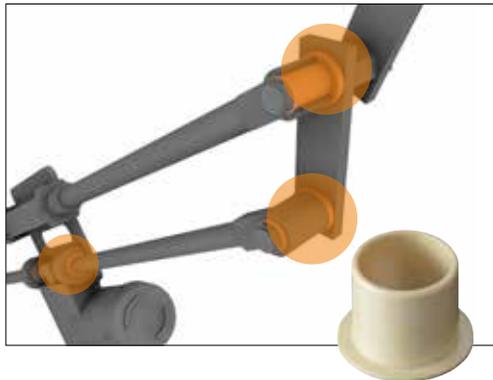
... and why?



Window lifters

igidur® J replaces lubricated POM plastic bushings

- Lubricant free
- High wear resistance
- Noise-free operation
- Easy installation



Windscreen wiper mechanism

igidur® J260 replaces lubricated brass and plastic bearings made of PA66

- Corrosion-free
- Dirt resistant
- Media-resistant
- High alternate bending strength
- Best price/performance ratio
- Lubricant-free



Throttle valves

igidur® X6 replaces PTFE-coated, wrapped aluminium bushing

- Plastic shafts possible
- Media-resistant
- No contact corrosion
- Low-cost



alternator – V-belt tensioner

igidur® G replaces metallic wrapped plain bearings

- Vibration dampening
- Corrosion-resistant
- Wear resistance under sustained pivoting



e-chain® solutions for automobiles for the continuous supply of energy and signals in on-board systems

System E2 micro for

- Tailgates
- Sliding doors
- Seat adjustment
- Window lifters
- Interior mechatronics
- Windscreen wipers

Advantages of igus® e-chains®

- Stable (100% greater fill weight, 25% and more unsupported length)
- Quiet
- Rapid assembly (10 x faster to open)
- Modular system

Additional potential bearing locations in the vehicle



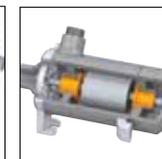
Hinge systems



Steering system



Gearbox



Water pump



Chassis



Brake calliper



Step #3: India the adventure begins

The great adventure begins. After endless hours in customs at the New Delhi airport, the car could finally start its tour on the roads of India. The car travelled more than 5,000 km from New Delhi in the north to Bangalore in the south, and visited more than 80 customers on the way.



Start at the "AutoExpo" trade fair in New Delhi. Our converted iglidur® compact car was the major attraction.



Stop-over at a cloister in Chennai, Southern India, with a breath-taking view.



More than 80 customers were visited in India, ranging from smaller firms, such as PWS, a machinery manufacturer for the food processing industry, ...



... to the largest Indian automobile manufacturer, TATA, in Pune.



Taking a break at the beach of the Bay of Bengal on the east coast of India.



Countless attractions along the route, such as the pink city of Jaipur.



Indian traffic bustle and constant honking. At times, driving in India was a test your patience.



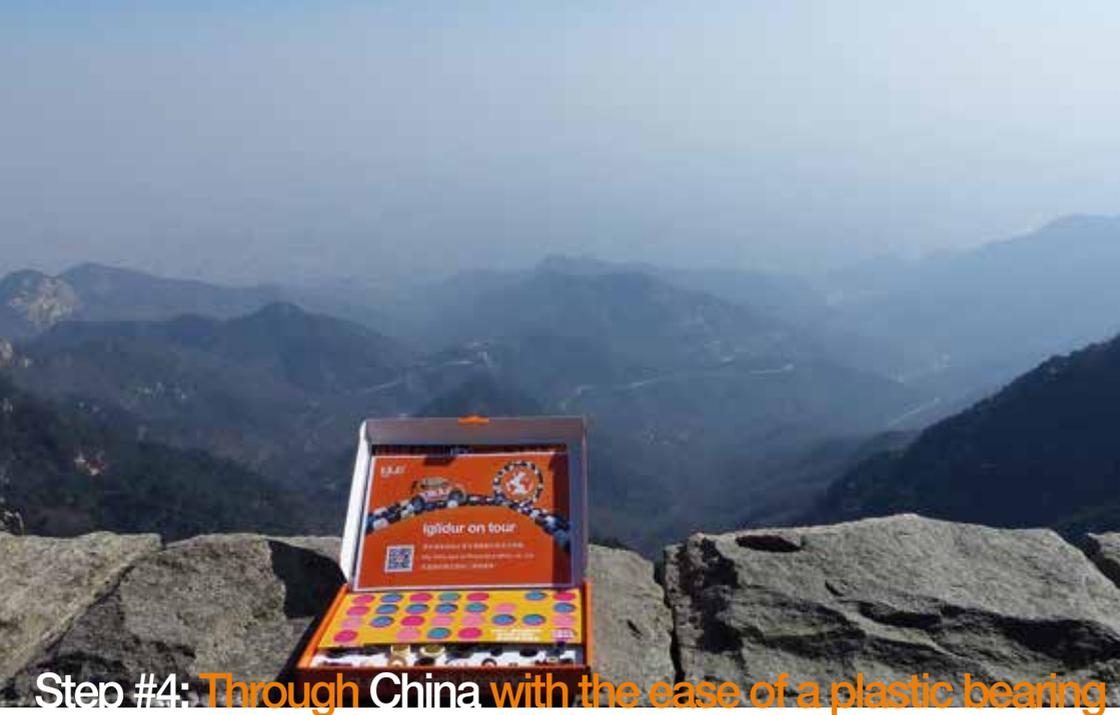
Heat and sand in the Indian desert presented no problems for the iglidur® bearings.



Under palms on the west coast.



A donation was made for every kilometre driven. At the end, the volunteer network "make a difference" received €10,000 for its projects.



Step #4: Through China with the ease of a plastic bearing

The tour country China challenged us with the first test of our patience: The approval from Beijing arrived only a few hours before the start. The route went from Shanghai via Qingdao on the China Sea to Beijing and back. Here again more than 5,000 km.



Start in the hyper-modern megacity of Shanghai.



Major press conference for the tour kick-off in China.



Made it! The driving license from Beijing arrived only hours before the tour start.



On the road in China. The daily stages frequently went late into the evening.



Many employees took advantage of the tour stop-overs at their company to learn about igus® high-performance polymers.



In addition to the small car, the "Truck" in-house trade fair - specifically designed for the tour - was an eye-catcher.



Intermediate stop-over on the East China Sea in Qingdao.



A must for a China tour: A stop at the Great Wall of China.

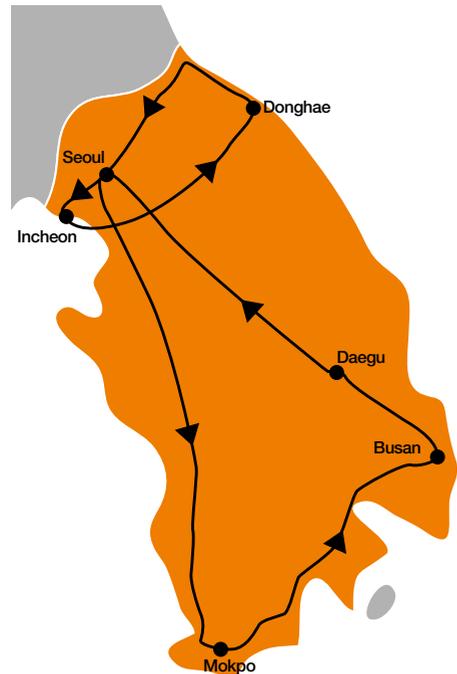


Our small car in front of the Mao Mausoleum in China's capital, Beijing.



Step #5: Across South Korea

South Korea was the first country that our car could enter with no complications and in record time. This left us enough time to drive 3,300 km across the country. From the border with North Korea to the megacity, Seoul, and on to the southern tip of the country on the East China Sea.



Arrival in Busan, Korea's second largest city.



In the middle of Seoul, the tour was presented to the Korean press and officially started.



The car was wished the best of luck in a colourful shamanic ceremony. We then headed straight off through Korea.



We crossed Korea from north to south. At the most northerly point, in the border region with North Korea, known as the "Demarcation Line", we even had to pass military checkpoints.



The team was on the road for many hours every day, in order to drive as far as possible and visit as many customers as possible.



On the Seoraksan, one of Korea's highest mountains (over 1,700 m).



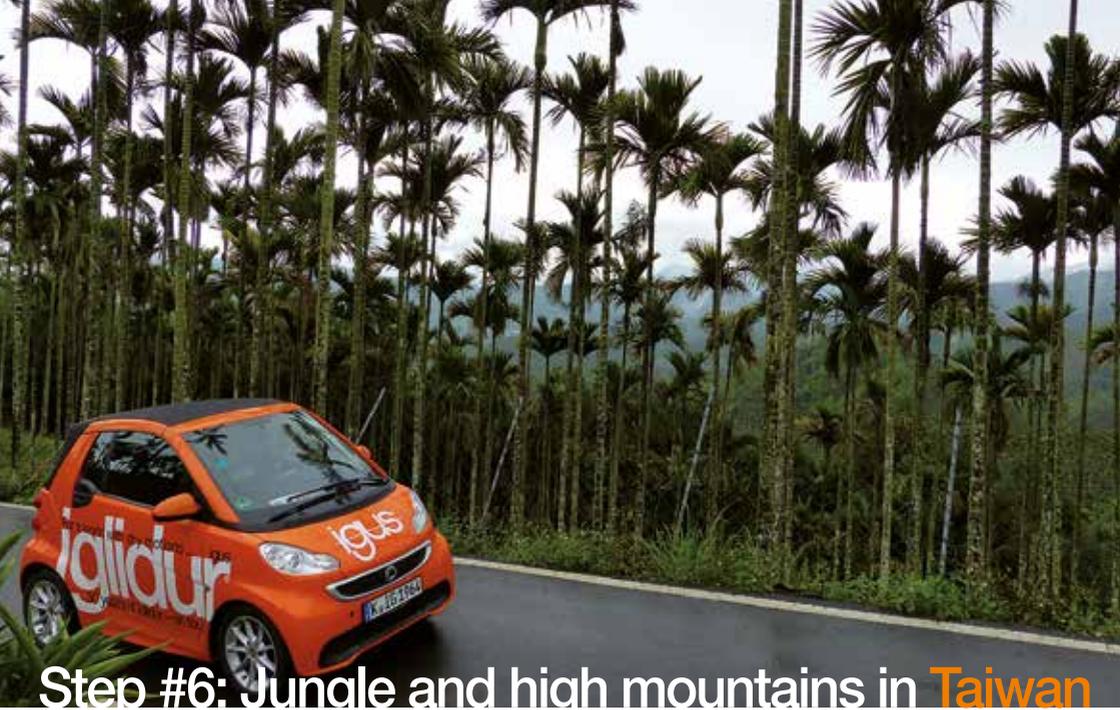
One of many customer visits: A solenoid valve manufacturer uses iglidur® bearings for automotive applications.



Always in the luggage for customer visits: **dry-tech**® box and catalogue

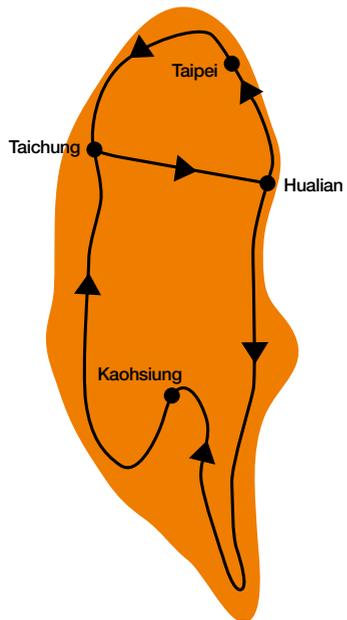


For every kilometre we drove, 1 kg rice was donated to soup kitchens for people in need. By the end of the journey, more than 3 tonnes of rice had been donated.



Step #6: Jungle and high mountains in Taiwan

Despite Taiwan being the smallest country on our round-the-world trip, our little car still travelled more than 2,700 km. On route to igus® customers, it drove through dense rainforests and green rice fields, across mountain passes at altitudes of over 3,000 m and through ultra-modern cities. The iglidur® bearings functioned without any problem in tropical conditions with temperatures of over 30 degrees and extreme humidity.



Small car and skyscraper. At a towering height of over 500 m, the Taipei 101 is one of the world's tallest buildings.



The "Sacred Tree" in Taroko National Park is said to be more than 3000 years old.



The press conference was attended by journalists and dignitaries from Taichung City.



As it was the rainy season in Taiwan, the car was sometimes even allowed to drive into the factory buildings.



On the south coast of Taiwan. Here the weather was much better.



A huge mountain range runs through Taiwan. The mountain pass road winds its way into the clouds at altitudes of over 3000 m.



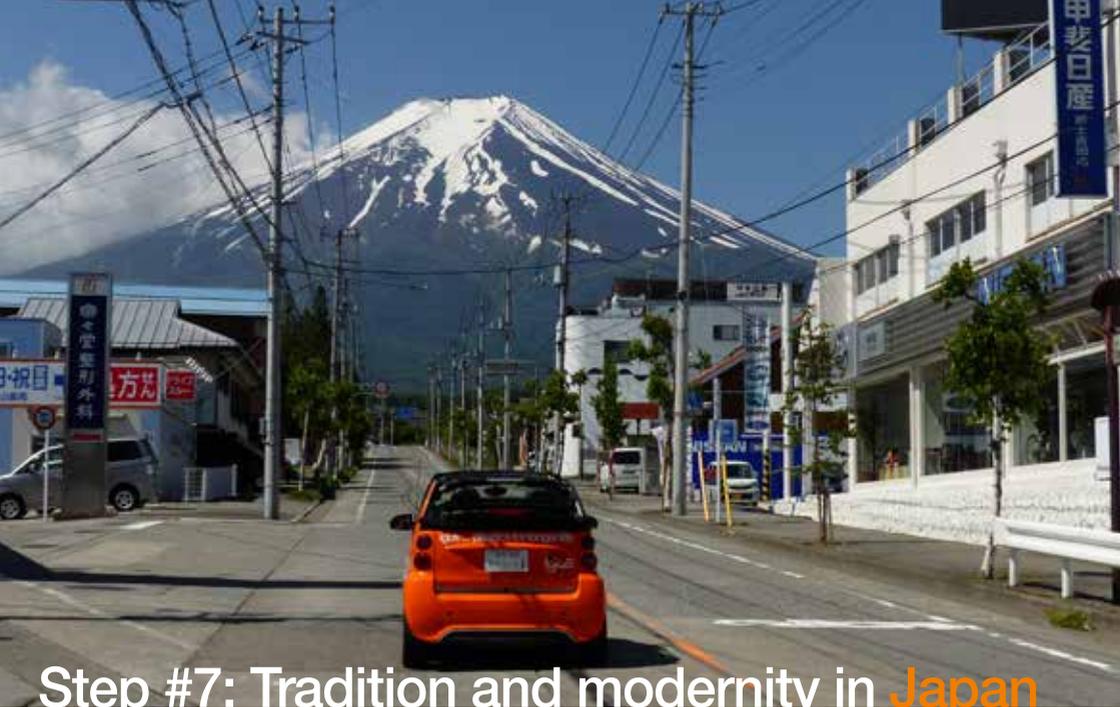
Two organizations that support disabled children were assisted by the donation of €1 for every kilometre driven.



The bicycle industry plays an important role in Taiwan and for iglidur® bearings. Many customers from this sector were visited on the tour.



Impressive temples regularly emerge from the jungle.



Step #7: Tradition and modernity in Japan

Japan was the last and most easterly stage of our world tour in Asia. Our small car drove more than 5,200 km in the island nation. Typically Japanese: The Japanese colleagues not only planned the tour itself down to the last detail, even customer visits were precisely coordinated to the minute. Following extensive red tape during the certification process, the tour went from the megacity Tokyo to the most southerly tip of Japan, travelling past Mount Fuji and back north to the city of Sendai, which was particularly hard hit by the 2011 tsunami. The collected donations were presented to an organisation that is helping the victims of the disaster.



Traditional buildings can also be seen everywhere in the high-tech country of Japan.



Successful press conference in Tokyo for the tour kick-off, including a welcome from the German Embassy in Japan, which helped us manage the complicated certification process.



Left-hand traffic, traffic jungle, and Japanese traffic signs. At times, orientation was somewhat difficult when driving in Tokyo.



Headed south, we were able to get quite close to an active volcano.



The rural areas of Japan with lush mountains and rice patties were in stark contrast to Tokyo.



Visit to Hiroshima. The building in the background was left standing as a memorial to the bomb attack.



In Japan as well, customers were visited on almost a daily basis. Many concrete projects resulted from the visits.



In Sendai the money collected per driven kilometre was donated to an organisation that aids children in the aftermath of the tsunami.



The entire iglidur® Japanese staff sent the car off to Brazil with a traditional percussion performance.



Step #8: Football fever and expansive beaches in Brazil

Our car arrived in South America - to be more precise Brazil - just in time for the Football World Cup. In addition to a wide range of emotional football experiences in the megacities, Sao Paulo and Rio de Janeiro, the tour also continued on to a host of customers. From the tropical north to the wintry, cold south on the border to Argentina. Our car handled the enormous distances, at times on roads that were in extraordinarily poor condition, with flying colours. In the end, we travelled more than 6,000 km, resulting in an outstanding donation of EUR 1 per driven kilometre to a children's hospital in Jundai the city where the corporate headquarters of igus® Brazil are located.



Football fever in Rio. Of course, we paid a visit to the famous Maracana stadium (top) and the fan festival at the Copacabana (below).



Six iglidur® bearings have been installed in each of the thousands of seats in Curitiba stadium, allowing them to be flipped up and down smoothly.



Travelling through the road canyons of the megacity Sao Paulo. With a population of more than 20 million, it is the economic hub of Brazil and the largest city in South America.



The, in some cases long, cross-country trips into remote regions placed considerable demands on iglidur® bearings and the drivers.



Our car was represented by our dry-tech® box anywhere the car could not go. Here, at the famous Iguacu waterfalls on the border between Brazil and Argentina.



Naturally in focus, also in Brazil: Customer visits, which were frequently also conducted outdoors in front of the company site because of the tropical climate.



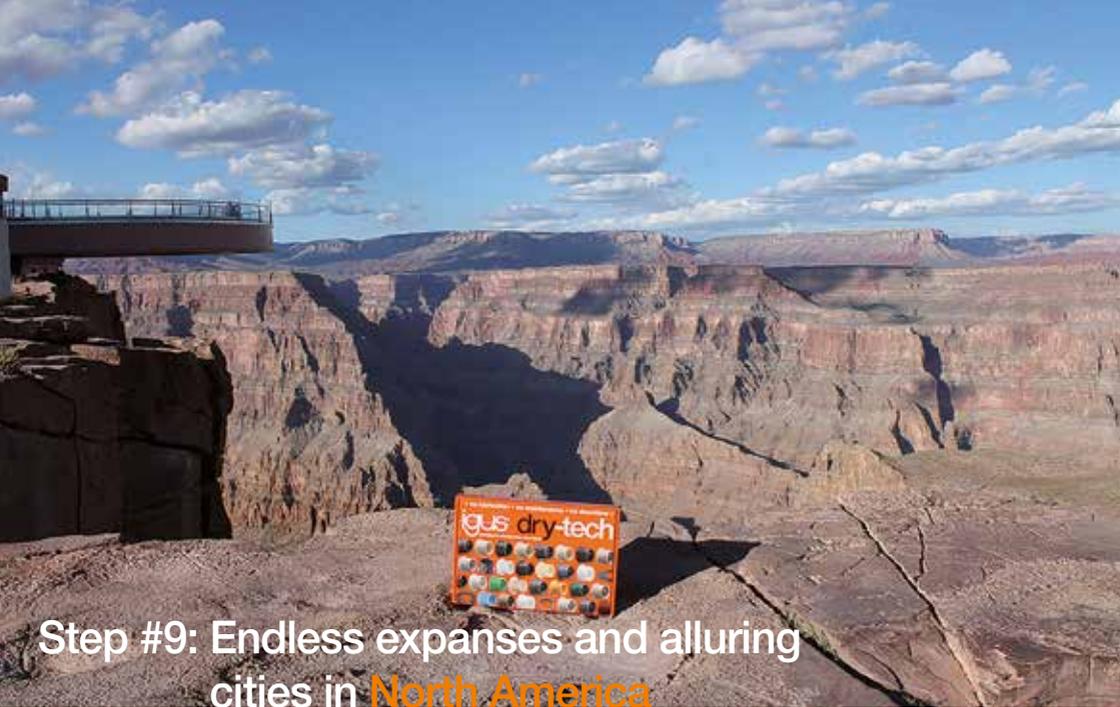
Blumenau is home to the world's third largest Oktoberfest. Last year's princesses stopped by for a photo opportunity with our car.



In Rio de Janeiro with the famous Sugarloaf mountain in the background.



Major interest in the small car also among journalists at the concluding press conference in Sao Paulo.



Step #9: Endless expanses and alluring cities in North America

Our ninth stage began in the USA's most northern state – the remote regions of Alaska. From Anchorage, we drove through the breathtaking Canadian countryside to the legendary cities on the west coast of the USA, through spectacular national parks and fertile landscapes in the Midwest, we past through the southern states and drove on to the famous east coast. Overall our car travelled over 23,000 kilometres.



Our iglidur® car in the midst of Chicago's urban canyons.



Dust and scree – our little iglidur® car mastered Alaska's roads with flying colours



In Yukon in the solitary northwest of Canada, we encountered more bears than people.



A lovely view – on the steep streets of San Francisco with a view of the harbour and the prison island of Alcatraz.



Our star among its peers: A visit to Beverly Hills



An enjoyable saunter on the Las Vegas Strip: Countless casinos and hustle and bustle.



On our tour, in addition to visiting many customers, we also visited the iglus® booth at the IMTS Trade Show in Chicago, one of the biggest trade shows in the USA.



Driving past Mount Rushmore: Not set in stone but still with a long service life – our iglidur® bearings lasted for the entire journey.



Good vibes for iglidur®: in Nashville, Tennessee, music was in the air, everywhere.



Endless expanses even in the Midwest of the USA



The **dry-tech**® box represented the car at Niagara Falls.



Some customers examined the little car very closely indeed.



A stop in the US capital with the Washington Monument in the background.



The day stages involved hours of driving through the vast expanses of the Great Plains, such as here in South Dakota.



Our little car posing for a photo against the Chicago skyline.



A brief visit to Fenway Park in Boston, Major League Baseball's oldest stadium.



Indian summer on the east coast of America.



iglidur® on tour in front of the Milwaukee Art Museum.



We also visited major publishing houses, such as Penton Media in Cleveland.



In the mad traffic of the "Big Apple".



Last stop before returning to Europe: The little car at Times Square in New York City.



The little iglus® in-house exhibition was always well-attended when meeting with customers.



On the road in North Carolina, the heart of the US furniture industry – as you can clearly see!



Senator Jack Reed also visited the iglus® US corporate headquarters in celebration of the successful tour of North America.



Done: the US iglidur® team on tour at iglus® inc. in Providence, Rhode Island



Open house: Start of the tour of Europe

igus® plain bearings are used in mountain bikes as well as gliders, and wherever they are used they ensure lubricant-free and low-maintenance movement. To demonstrate the versatility of the products - in addition to plain bearings, also energy chain systems - on October 25, igus® opened the factory store for employees and their families. Under the "Porz op" motto even toddlers learned where the plastic products from igus® are found in everyday life, and how they are designed and manufactured. The igus® on-tour car was a secret major player of the event. To start the tour of Europe the little car made another stop in its hometown of Cologne.



The Kölsch dialect band Kasalla, ensured that the right atmosphere prevailed.



TV detectives, Klaus J. Behrendt and Dietmar Bär are fascinated by the round-the-world trip of the little convertible.



Singing along was allowed: Kasalla celebrated together with igus® employees on the stage.



A tour through the factory took visitors on a journey through the history and the potential of the lubricant-free plastic products.



Over 4,000 visitors celebrated the 50-year jubilee of the igus® factory in Cologne Porz-Lind.



Another star at the open house: The famous Currywurst (curry sausage) stand from the Cologne TV detective show.



With Kölsch (famous Cologne beer), coffee and cake the event was well-catered.



CEO Frank Blase presents a donation to TV actors, Klaus J. Behrendt and for the association "Tatort – Straßen der Welt e.V." which they founded.



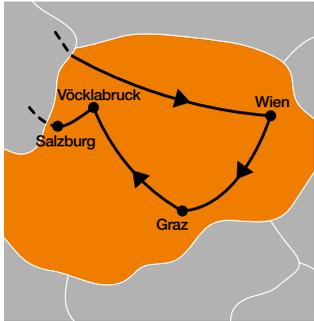
Not with the small orange car – at igus® toddlers were able to really zip around with the electric scooters.



Where Cologne is, Karneval must not be missing: Kasalla showcased their hit "Pirate".

Step #10: Over the mountains in Austria

In the first country on the Europe tour, the new iglidur® on tour Europe team drove more than 1,600 km through the Alps. In addition to many exciting customer visits, a press conference at the Prater in Vienna and the showing of the iglidur® on tour films in a cinema, were other highlights of the first week.



Stop at igus® Austria in Ampflwang.

Short stop at the clocktower in Graz.



A visit in Linz.



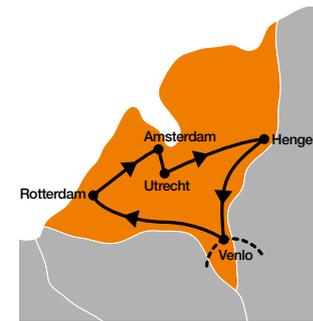
Sightseeing in Vienna, our little car in front of the Hofburg.



In a cinema in Regau the tour film was shown to more than 200 customers.

Step #11: By the sea in the Netherlands

Even in a small country you can do a lot of driving. The small car was driven over 1,000 kilometres on roads in the Netherlands. Many motion plastics®-applications were visited: igus® applications in use in floodgates, in gigantic harbour cranes or in bicycles.



More bicycles than cars: Stop in Amsterdam.



Visit to Erasmus University in Rotterdam.



Really big and really small in the Port of Rotterdam.



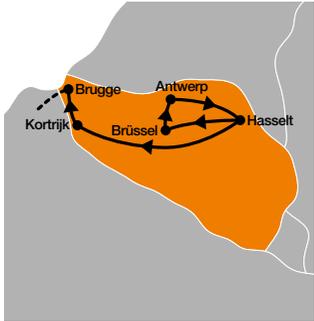
Behind the scenes: Filming at customer sites.



One of many customer visits.

Step #12: Race ready in Belgium

Fries, beer and chocolate ... we are in Belgium. On the almost 1,000 km trip through the country we not only tried the delicious things. Again we visited many customers with exciting applications, and we took a few laps on the Circuit Zolder race track.



Also outside in good weather: Customer visit in Belgium. At the Atomium in Brussels.



En route in the Port of Antwerp



A few laps on the Circuit Zolder.



Delicious! Belgian fries.

Step #13: With the Queen in the UK

More than 2,768 km were driven across the United Kingdom. Left-hand traffic was a new challenge for the drivers. But this challenge was mastered, and thus we got a serenade in Edinburgh and even a photo with the "Queen" in London.



Countryside idyll in the New Forest.



The Mayor of Nottingham came to the check handover ceremony.



The trip included Stonehenge.



In front of Buckingham Palace in London.



On the road in Scotland.



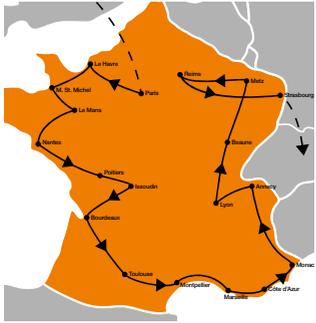
A serenade for our car in Edinburgh.



Star at the Birmingham trade fair.

Step #14: Tour de France

Three weeks and more than 5,300 km - France is large and varied. From the Paris metropolis the tour continued along the west coast to the Riviera with a stop among the rich and beautiful in Monaco, before driving through the Alps Alsace and back to the north. Exciting customer visits, wine sampling, many sights included.



Start of the French tour in Paris.



The Riviera, as it is seldom seen: Rainy.



Visit in Monaco.



The **dry-tech**® Box in Bordeaux visiting the Miroir d'Eau, the largest reflecting pool in the world at 3,450 m².



The customer visit is prepared.



Great panoramic view in the French Alps.



Morning mood on the motorway.



Evening on the bridge "Pont de Normandie"



A visit to the sun king in Versailles.



One of France's landmarks: Mont-Saint-Michel.



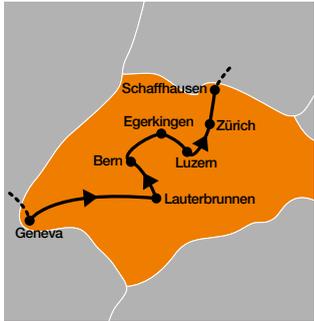
Amphitheatre in Nîmes.



More than €5,000 went to APF, an organisation that helps people with physical disabilities.

Step #15: Way up high in Switzerland

Switzerland was the last country we drove through in 2014: 1,800 km uphill and down. And once way up high: The press conference was held on the Schilthorn at an elevation of almost 3,000 m. For this event our little car had to be transported to the summit via helicopter.



At the Rhine Falls in Schaffhausen.



Chapel Bridge in Lucerne.



3,000 CHF was donated to VEBO, an organisation devoted to helping people with disabilities.



Airy heights: For the press conference there was a helicopter air lift to an altitude of almost 3,000 m.



On the road in Switzerland.



Mountains in every direction.



Evening in front of the Federal Palace of Switzerland (Bundeshaus) in Bern.



Even in cool weather the customers came outside.



Sightseeing in Lucerne.



A James Bond movie was filmed on the Schilthorn in the late 60s.



Many Swiss journalists visited the car on the mountaintop.



On Lake Geneva in Lausanne.

Step #16: Short days in Norway

After a New Year's Eve celebration in Berlin the tour went directly to tour country 2015 Norway. Here we had our first experiences with winter: Rough seas for the crossing, extremely short days and snowy roads put vehicle and drivers to the test. In spite of these conditions we drove more than 900 km.



They ensure winding roads: Fjords in Norway.



In Norway snow chains were used for the first time.



Winter idyll near Stavanger.



A donation was presented to a hospital in Trondheim.



Brief foggy visit to the Holmenkollen ski jump in Oslo.

Step #17: Elk test in Sweden

The next country in the north was Sweden. In addition to Elk and Abba, on the 1,697 km several world-famous companies were also visited. A first on the tour: For the first time, a German journalist travelled exclusively with the tour crew in order to report on the tour live.



In front of the palace in Stockholm.



Thank you for the music ...



Night drive to Stockholm with lots of snow.



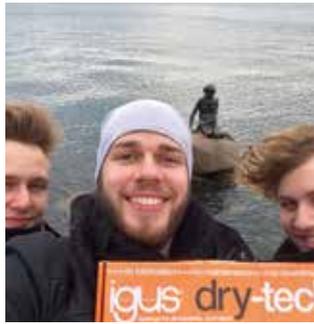
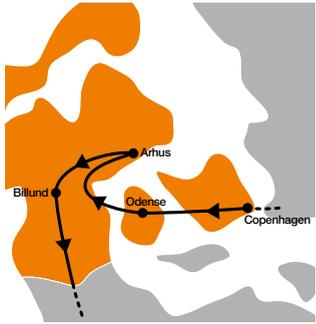
The donation went to "Frihamnen", an organisation that operates a homeless shelter.



Elk safari in Southern Sweden.

Step #18: Plastic meets plastic in Denmark

Over the Öresund bridge and we are already in the next tour country: Denmark. Over 1,000 km and many interesting customers were on the route that went all through the country.



Smaller than you think: The Little Mermaid in Copenhagen.



Changing of the guard at the royal palace in Copenhagen.



Driving on Danish roads.



On the beach in Denmark.



drylin® linear guides ensure a "genuine" snow feel in the cross-country trainer.



Press conference in Copenhagen.



Plastic meets plastic.



Closed, unfortunately: Tivoli Gardens.



Winter catches up.



On the way to Denmark.



Always taken gladly: Catalogues and samples.



The Scandinavian crew in Copenhagen.

Step #19: Cold test in Poland

The first tour stop in Eastern Europe: Poland. One week, over 3,700 km countless customers and deepest winter. The trip took us from the Baltic Sea over the mountains in the south and the Eastern border with Belarus, to the capital Warsaw.



In the native city of Copernicus in Thorn.



Demonstration of a customer application.



Giant excavator in a Polish open-pit mine.



In Eastern Poland it was extremely cold and wintery.



The donation went to an organization that cares for orphans in Warsaw.



Day stages until late in the evening.



Start on the Island of Hel on the Baltic Sea in the most beautiful winter weather.



The over 500 m long ocean bridge in Sopot.



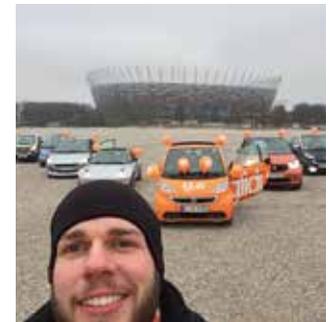
At the geographic centre of Europe.



Stop in Krakow



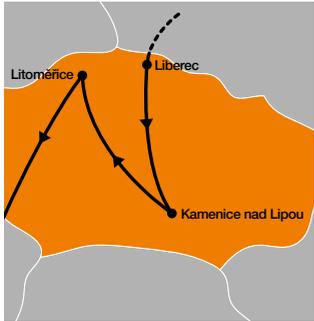
Visiting heavy industry.



"Family get-together" in front of the Warsaw stadium.

Step #20: Racing fever in the Czech Republic

Together with our dealer, Hennlich, at the Litoměřice site a very special event was organised: A race of the iglidur® on tour car against a formula student racecar – likewise equipped with iglus® products. This event even received nationwide TV news coverage. In addition, on the 800 km trip through the country again we were able to inform many customers of the advantages of motion plastics®.



Thanks to better traction, the iglidur® on-tour vehicle won.

They also function in hot conditions: **dry-tech®** bearings in a glass-blowing workshop.



Customer visit in the Czech Republic.



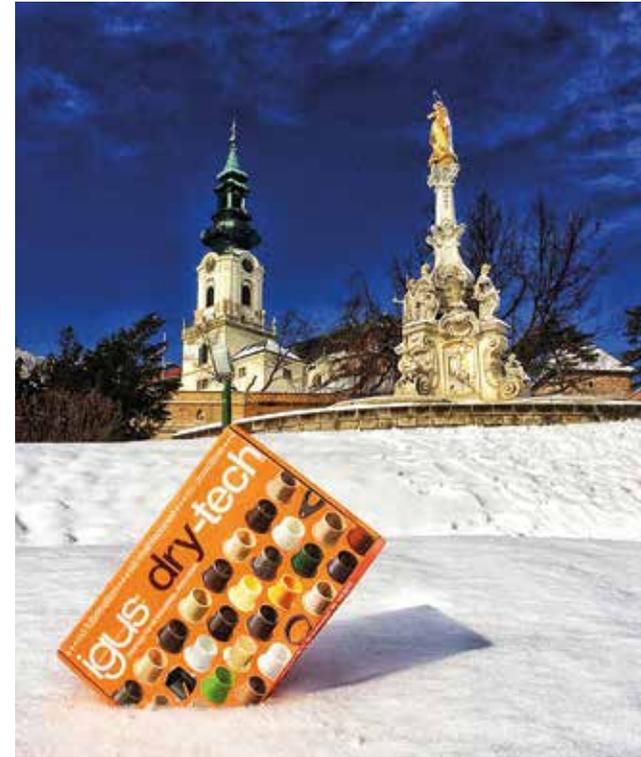
Just before the start, the outcome of the race was still uncertain.



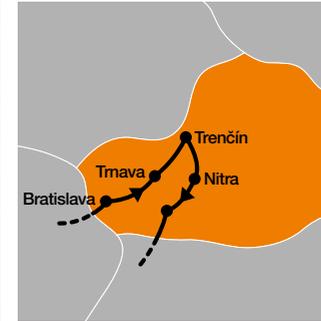
Wintry road conditions also in the Czech Republic.

Step #21: Snowstorm in Slovakia

After a one-day side trip to the industry press days in Karlsruhe (Germany), the iglidur® on tour car arrived punctually for the next customer visits in Slovakia. A heavy snowstorm made the stage particularly stressful for drivers and vehicle, nevertheless our little car did 453 km with no problems.



After the snowstorm glorious winter weather prevailed, here at the Nitra Palace.



Bratislava in the background.



"Plaste" meets plastic.



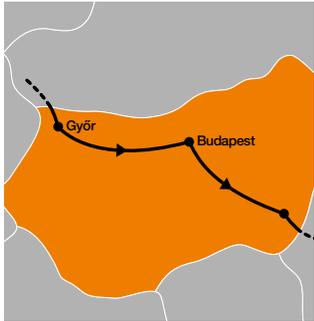
Driving in the snowstorm.



Photo shoot with the dealer colleagues of Hennlich Slovakia.

Step #22: Through the Puszta in Hungary

Next stop on the tour: Hungary. In a few days we drove more than 600 km from north to south through the country. Within a short period of time, again many customers were visited and in Budapest, at the headquarters of igus® Hungary, again a press conference was held. After several sightseeing stops, the journey continued on through the Puszta towards the Romanian border.



Just before the press conference at the headquarters site in Budapest.

The team arrived in Budapest late in the evening.



Presentation at a customer's facility.



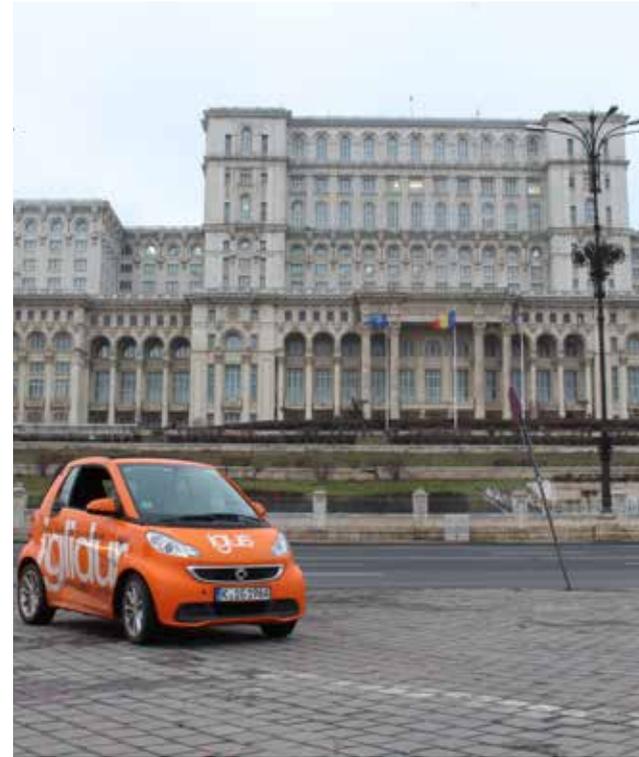
Night stop on the banks of the Danube in Budapest.



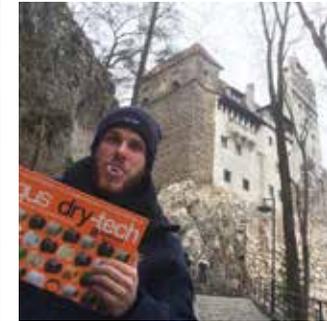
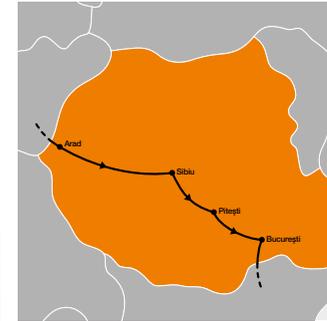
Short stop at the Pannonhalmi Cloister.

Step #23: Across Romania

Further into Eastern Europe through Romania. We drove 940 km from Arad via Sibiu and the capital Bucharest to the Bulgarian border. In addition to many customers, Count Dracula's castle was also on the itinerary.



Windy weather at one of the largest buildings in the world, the Palace of the Parliament (House of the People) in Bucharest.



Die **dry-tech**®-Box at a visit at Count Dracula's Bran Castle.



At the Sibiu market square.



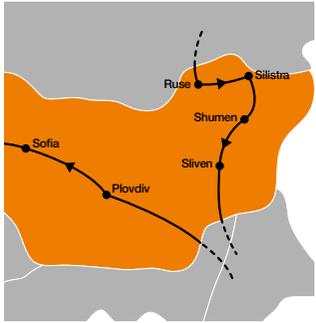
Arad was the first stop in Romania.



Our little car made new friends.

Step #24: Adventure in Bulgaria

We drove through Bulgaria in two stages. Winter weather and thus difficult road conditions ensured that we often drove until late in evening over the 1,000 km tour. However, even on what in some case were adventurous bumpy roads all bearings held and the little car arrived at the respective destination of the stage.



Quick wash.



Next stop: Bulgaria.



The Shumen Monument was erected to commemorate Bulgaria's 1,300 year history.



Incredible landscapes en route to the next customer.



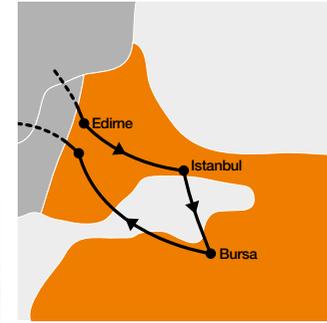
Big crowds for the customer visits.

Step #25: Europe & Asia in Turkey

Turning point on the Europe tour: Always southeast until Istanbul, then we turned around and drove north. Not without making a side trip into the Asian part of Turkey to link up with the beginnings of the 2014 tour. Overall the Turkish stage was more than 900 km.



View across the Bosphorus.



One of countless mosques in Istanbul.



Waiting for the ferry in Bursa.



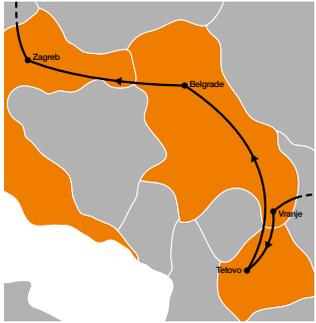
Turkish customs authorities make entry into the country somewhat adventurous.



Great customer visits.

Step #26: Spontaneous trip to Macedonia

On short notice Macedonia was also included in the tour planning, and it was worth it. A wonderful small country with many enthusiastic people, in which we travelled over 200 km. Many customers came to a central event at the University of Tetovo, where the advantages of igus® polymers were discussed with many students.



Stop in the centre of Tetovo.



More than 50 visitors came to the central event in Macedonia.



Late at night at the border.



Visiting the "Xhamia e Larme" mosque in Tetovo.



Closing shot with students of the University of Tetovo.

Step #27: Hurrying through Serbia

We had just under two days for the trip through Serbia. Consequently, we had to hurry and could only make a short stop in Belgrade on the over 500 km stage.



Entering Serbia at a small border station.



On the road in the mountains of Serbia.



Driving to Croatia.



Always towards the sun on the way to Belgrade.



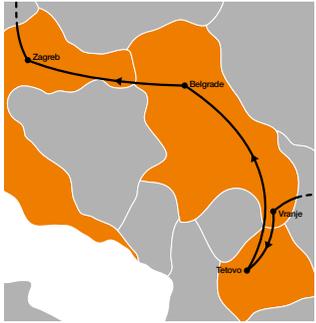
Shirtless in spite of winter weather



Stop on the highway.

Step #28: Spring in Croatia

In Croatia we had our first encounter with Spring. In glorious sunshine we drove more than 400 km through the country, visited the capital, Zagreb, and were able to show many customers the advantages and application possibilities of igus® products at an event at the site of our dealer, Hennich.



Customer event at the company main office of Hennich Croatia. In the city centre of Zagreb.



At "King Tomislav" square in Zagreb.



At the Zagreb Cathedral.



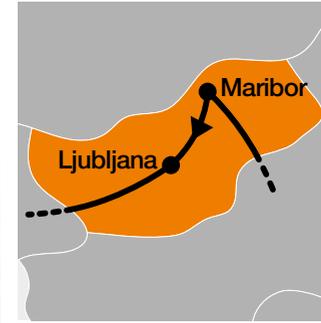
Back in the EU.

Step #29: Again mountains in Slovenia

Last stop in Eastern Europe: Slovenia. Via Maribor and the capital Ljubljana, we drove a total of 724 km through the country to the Italian border. In addition to stops at customer sites and Lake Bled, many customers and prospects also came to the closing event in the Vransko Motorcycle Museum to learn about igus® over a glass of mulled wine.



Sunshine and spring-like temperatures on Lake Bled.



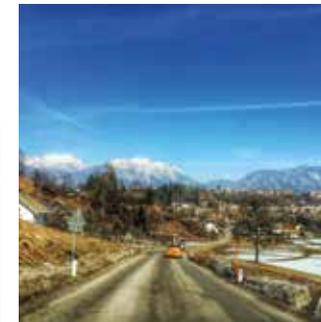
Exciting reading above the roofs of Ljubljana.



Good mood at customer visit.



The **dry-tech**® box also enjoys the view.



On the road in the mountains near Maribor.

Step #30: Dolce vita in Italy

In two weeks we drove more than 3,000 km in Italy, from Venice down to Rome and back to Milan. In addition to many tourist highlights, we visited numerous motion plastics® applications from the "young Turk" designers at the 3D printer trade fair in Milan, to the high-performance solutions for sports car manufacturers.



Spring has arrived.



At the 3D Print Hub trade fair in Milan.



Visit at Ferrari in Maranello.



At the Colosseum in Rome.



The dry-tech® box had to take a look around the narrow canals of Venice.



En route to the next customer.



Stop in spring-like Umbria near Assisi.



View of the Tuscan coast.



Almost all roads lead to Rome.



In the vineyards of Alba.



With iglidur® bearings it would perhaps still be straight.



The donation was also presented at the trade fair in Milan.

Step #31: Heat and sun in Spain

We visited Spain, the second-to-last country on the tour, in two phases. From the igus® Spain headquarters site in Barcelona, we then drove down the east coast to Portugal and then later along the Galician coast to our final destination Madrid - more than 4,000 km overall. Although with temperatures up to 30 degrees in Andalusia, swimming in the Mediterranean was indeed a thought, in the north winter and snowfall caught up with us again.



At igus® Spain in Barcelona.



In front of the "Sagrada Familia" basilica in Barcelona.



On the beach of Marbella.



On the road under a scorching sun in Andalusia.



Oranges directly from the tree in Southern Spain.



There were long day stages in Spain as well.



On the Atlantic coast near Gijón.



In Galicia the winter caught up with us again with fog and snow.



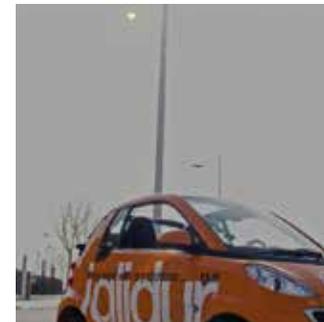
At the Guggenheim Museum in Bilbao.



Last sightseeing spot: the Almudena Cathedral in Madrid.



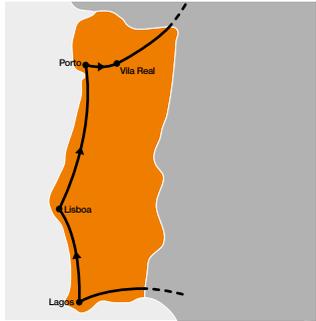
In the centre of Seville.



The eclipse in Northern Spain.

Step #32: Great explorers in Portugal

The final stage of iglidur® on tour: Portugal is the last country on the tour. One time from south to north, 1,630 km from the Algarve via Lisbon to Porto in the north. With pleasant temperatures, among other things, a visit to e-chains® in the Port of Porto.



Cabo de São Vicente, the southwestern tip of the European mainland.

The small car had already seen a similar bridge in California: The bridge "Ponte 25 de Abril" in Lisbon.



We also visited the model in Brazil: The statue "Cristo Rei" in Almada/Portugal



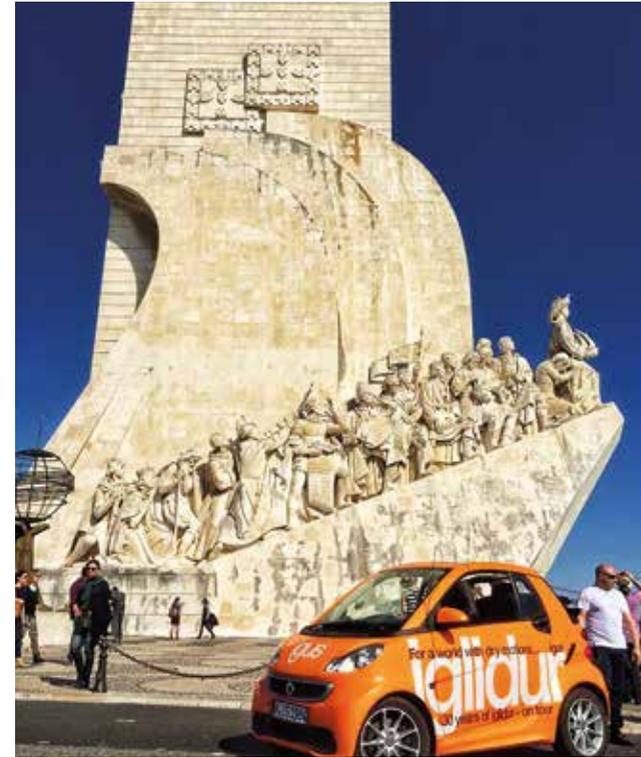
Interested spectators.



Terreiro do Paço in Lisbon.



On the "Ponte Vasco da Gama", with a length of more than 17 kilometres it is the longest bridge in Europe.



Explorers together: The little car at the "Padrão dos Descobrimentos", which was erected to honour the great mariners and explorers.



En route to Lisbon.



Sundown en route to the Algarve.



e-chain® in use on a ship-to-shore crane in the Port of Porto.



At the UNESCO World Heritage Site "Torre de Belém"



Delicious: Visit to a vineyard in Porto.

iglidur® on tour – more than 32 countries in 14 months ...

ASIA

02/2014 – India
03/2014 – China
04/2014 – Korea
05/2014 – Taiwan
05-06/2014 – Japan

AMERICA

06-07/2014 – Brazil
08-10/2014 – USA,
Canada

EUROPE

25/10/2014 – return to
Cologne for the 50th
anniversary celebration
of igus®
and the start of the
Europe tour
04/2015 – finale at the
Hannover Messe



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Czech Republic ... Slovak Republic ... Hungary ... Romania ... Bulgaria ... Turkey ... Macedonia ... Serbia ... Croatia ... Slovenia ... Spain ... Portugal

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Tour guide - world tour:
Sascha Laufenberg



Tour crew Europe:
Nils Schneider, Sandor Meierjohann,
Karl Weinmeister



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