

city^{snap}

Shaping The Future of Urban Mobility



RINSPEED



Content

Technische Daten / Technical Data

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ams Osram

BCS

Borbet GmbH

Ernst & Young GmbH

Falken Tyre Europe GmbH

Gentex Corporation

Keba AG

Kern GmbH

Mosolf Move-Tec GmbH

OBE Kinematics

Prettl Lighting & Interior GmbH

Recticel Engineered Foams

Schoeller GmbH & CoKG

Strähle+Hess GmbH

Stratasys GmbH

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Technical data

(Elektrische OEM-Version)*

MEASUREMENTS BASE VEHICLE

Length	6'433 mm
Width	2'349 mm
Height	2'668 mm
Wheelbase	4'130 mm

POWERTRAIN (OEM)

Electric Motor	90 kW
Torque	280 Nm
Power Train	Front Axle
Batteries	47 kW - Lithium-Ionen

PERFORMANCES

Top Speed	app. 100 km/h
Electric Range City	app. 163 km

VEHICLE SETUP

Body	Stahl (OEM)
Capacity	2
Interior Design and Materials	Strähle+Hess Schoeller
LED and UV-C Technologies	ams Osram
LED Rear Lights + Projections	Prettl

MOBILE LOCKER STATIONS

Light-weight locker boxes	KEBA
Capacity	up to 3 full size modules
Parcel capacity	up to 3 x 40
Rear storage system	OBE Hettich

TIRES

Front and rear Tires	Falken Wildpeak AT3WA 255/60-18
Front and rear Wheels	Borbet Type CW5 - 7.5 x 18"

MISCELLANEOUS

Acoustic and Heat Shielding	Recitel
3D Printing	Stratasys
Steering wheel HMI	BCS Automotive Interface Solutions
Camera docking system	Gentex
Vehicle build-up	Mosolf Move-Tec

* = Film vehicle with ICE

All data without guarantee

RINSPEED

Innovative sustainability and efficiency in deliveries: Mobile locker stations help to avoid traffic disruptions in the city

World premiere at the IAA Mobility in Munich

The fourth generation of Rinspeed's modular „CitySnap“ vehicle shows the way to pilot tests and series production. Mobility pioneer Frank M. Rinderknecht: According to the latest study, every other delivery vehicle is superfluous.

„CitySnap“ reduces traffic, emissions, and costs - focus on customer convenience and efficiency

The „CitySnap“ proof-of-concept vehicle shows a solution for innovative, sustainable, and efficient delivery that can be implemented at short notice. „Customer Focus“ is the Rinspeed motto. The customer - and thus the person - is the focus with all facets. Because Rinspeed boss Frank M. Rinderknecht is certain: „People want more and more convenience and simplicity, but also sustainability in their lives“. This unique delivery solution offers both.



Global online trade - projected to grow by around four percent prior to Covid-19 - has literally exploded in the past fifteen months with growth rates of 30% and more. The volume of goods and parcels from eCommerce has increased dramatically, today some 3'250 parcels are shipped worldwide every second. There is no end in sight to the exponential growth.

This extraordinary situation calls for modern delivery solutions - preferably contactless, hygienic, and therefore very customer-friendly. With delivery vehicles that independently distribute, place, and collect mobile locker stations, the Swiss powerhouse of ideas Rinspeed is presenting an exciting logistics concept.

The case study of one of the world's leading auditing and consulting firms examined the Rinspeed „CitySnap“ delivery concept in the context of the growing demand for logistics and developments in urban areas. The scenarios show - based on the fifty largest cities in Germany - an impressive savings potential. The use of the ingenious Rinspeed solution reduces the number of delivery vehicles required by up to 50 percent. In addition, this system saves six percent in CO2 emissions - per package! The „CitySnap“ also offers considerable savings potential in terms of costs. Compared to conventional parcel delivery, it reduces the expenditure involved by around 17 percent per

parcel, a cost advantage that consumers can benefit from. The increased productivity of the employees due to the eliminated time-consuming removal processes more than outweighs the additional costs for the mobile, interchangeable locker stations and the infrastructure.

The previously planned delivery mechanisms on the automated last mile and especially for the extremely important but also extremely critical „handover“, i.e. the acceptance of the parcel by the recipient, are unsatisfactory and inefficient. Even drones or intelligent robots will not be able to do this more cost-effectively in the medium term. A just-in-time meeting on the street between recipient and delivery vehicle is unsuitable because traffic and human behavior are exceedingly difficult to predict. If, on the other hand, the vehicle waits until the recipient of the parcel can arrive, the delivery rate falls, and the delivery costs rise accordingly.

So a new system is needed that eliminates the weaknesses of today's delivery system but is also compatible with the future - the „CitySnap“. The heart of the vehicle is an aviation-inspired swap system that has been tried and tested in all weather conditions worldwide (PCT patent pending). In the „CitySnap“, completely new applications are possible. Among other things, the desired service can now be delivered



to the customer quickly and easily, regardless of where the customer is - at home or at work. These can be transportable locker stations that are parked in the vicinity for a certain period so that they are accessible to the customer. „Microhubs“ for bicycle couriers, mobile dispensers, or points of sale such as a „mom-and-pop health food store“ or nuts and bolts for the construction site are also conceivable. The „CitySnap“ is truly multifunctional and even pallets are no problem.

Limited opening hours, long journeys and the endless and unpleasant courier caravans with the associated environmental and traffic burden are a thing of the past. And by the way: no more unattended shipments and no more theft. Locker stations on wheels, just around the corner. Set up in easily accessible and well-lit locations where end customers can get their parcels at any time in a secure environment. And the best thing about it is: This innovative way of delivering parcels to customers faster and more easily can begin today - with a human driver.

Fully automated driving, a realization as of late, will be a long time coming. That is why the „CitySnap“ is initially designed for a human driver. However, the driver's activity in the delivery of the locker stations is limited to driving. The „CitySnap“ with the mobile locker stations is already loaded and unloaded automatically and only takes a few minutes. Later

computers and sensors will take the place of the driver in the self-driving vehicle.

The „CitySnap“ is - as always when Rinderknecht is at work - peppered with technical and optical treats contributed by a global network of renowned companies.

EY has examined the market appeal of the „CitySnap“ logistics solution on the last mile and supports the step-by-step development of the future ecosystem for modular mobility.

New concepts require adapted solutions. That is why the well-known KePol locker stations from Keba from Linz, Austria, were adapted to the mobile requirements and a mobile lightweight version was developed. An app makes using the locker stations easy for everyone.

To make it easier for the driver to dock onto the platforms, the „CitySnap“ has a sophisticated camera system from U.S. supplier Gentex Corporation. The company's digital rearview mirror also shows what is happening behind the vehicle, allowing the driver to maneuver safely in traffic. The locker stations are also equipped with unique nanofiber sensors that can detect suspicious or even dangerous chemical substances.



Speaking of safety: modern touch panels on the steering wheel from BCS Automotive Interface Solutions control the desired functions with a light tap on the symbols. There are no limits to creativity in design.

With the help of LED-based UV-C lighting, the interior can be cleaned and prepared for the next passenger. The innovative rear lights with integrated display functions of the „CitySnap“ enable optical messaging with other road users. In the interior, the latest lighting and sensor technology meets functional A-pillars with safety displays. For the projectors and rear lights of the „CitySnap“, Rinspeed relies on the latest lighting technology from ams Osram and on innovative product solutions from Prettl Lighting & Interior in Pfullingen.

Rinspeed's latest project, the «CitySnap», rolls once again on Borbet wheels. This time on board: the stylish CW5 7.5x18 inches in „mistral anthracite polished glossy“. With a maximum wheel load of 1'400 kg, it shows thanks to its strikingly dynamic appearance: It can be very stylish to master even high wheel loads with flying colors. Successful tire pioneer Falken supplies its Wildpeak tires in the dimension 255/60-18, which are the perfect complement to the aluminum rims.





For years now, Rinspeed has rightly relied on its ally Strähle+Hess for innovative textile design and harmonious interior styling. The textile products made of recycled polyester compel with their astonishingly woolly feel. The knitted staple fiber yarn with an antiviral and antibacterial finish comes from Schoeller. Rinspeed pays great attention to the feel-good features of the interior. Recticel is the perfect address for this. The company contributes the expertise for acoustically and thermally effective foams.

Stratasys from Rheinmünster supplies innovative 3D printing of various materials for interior and exterior components in a single operation. The Rinspeed proof-of-concept car was technically realized by Swabian company Mosolf Move-Tec, a specialist in special-purpose vehicle construction and electromobility.

The „CitySnap“ can also transport bulky boxes or numerous return parcels. Thanks to the ingenious solution from OBE Kinematics in the rear, they can be loaded and unloaded in a more ergonomic position.

The physical world premiere of the „CitySnap“ will take place on September 6, 2021, at the IAA Mobility in Munich. The innovative creation of Swiss mobility pioneer Frank M. Rinderknecht will be in the Rinspeed booth # A71 at the Summit in hall A1 of the exhibition center - traditionally and professionally staged by the Saarland-based advertising agency and printing company Kern.



The partners in the „CitySnap“ are:

- ams Osram - <https://ams-osram.com>
- BCS - www.bcs-ais.com
- Borbet GmbH - www.borbet.com
- Ernst & Young GmbH - www.ey.com/de_de/automotive-transportation
- Falken Tyre Europe GmbH - www.falkentyre.com
- Gentex Corporation - www.gentex.com
- Keba AG - www.keba.com
- Mosolf Move-Tec GmbH - www.mosolf.com
- OBE Kinematics - <https://obekinematics.com>
- Prettl Lighting & Interior GmbH - www.prettl.com
- Recticel Engineered Foams - www.recticelengineeredfoams.com
- Schoeller GmbH & CoKG - www.schoeller-wool.com
- Strähle+Hess GmbH - www.straehle-hess.de
- Stratasys GmbH - www.stratasys.com



RINSPEED

Possible Variants



Mobile Locker Station Mixed



Conventional Delivery or Microhub

RINSPEED

Possible Variants

Grab & Go



Conventional and Mixed Delivery and Microhub



Grab & Go

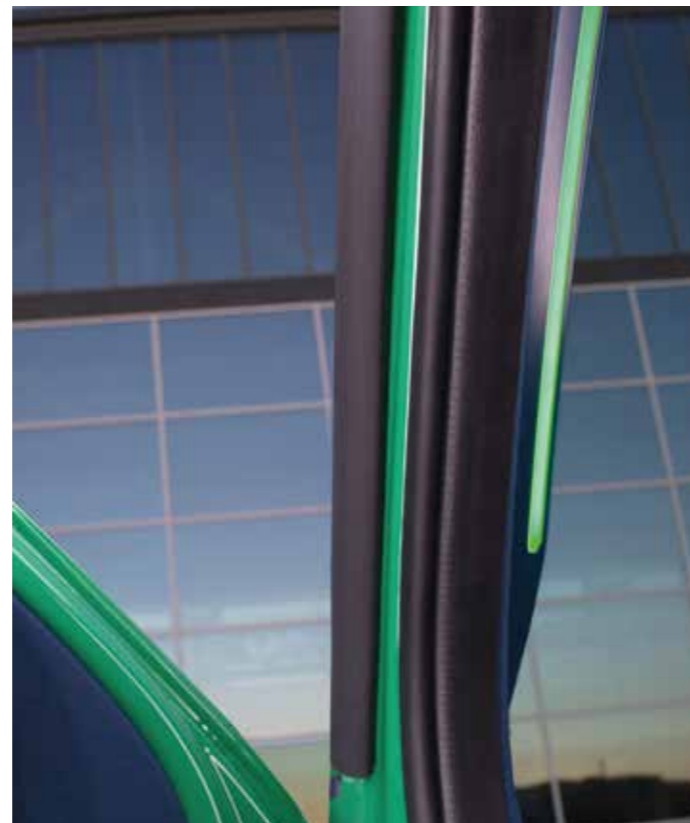


For the mobility of the future – smart sensor & lighting solutions from ams OSRAM

ams OSRAM combines light and sensor technology with intelligence, innovation and passion. With more than 110 years of combined history, the company defines itself by its profound technical expertise and the ability to develop the latest sensor and lighting technologies for global markets, enriching our daily lives.

Inspiring innovations in the automotive, consumer, industrial and healthcare sectors enable a wide range of customers to gain decisive competitive advantages. At the same time, ams OSRAM empowers its customers to drive innovation themselves in order to improve the quality of life for all of us in the areas of health, safety and comfort.

With its combined expertise, ams OSRAM is now jointly presenting itself for the first time as the exclusive sensor and lighting partner of the Swiss think tank „Rinspeed“. The jointly constructed „CitySnap“ prototype shows what the vehicle and mobility of tomorrow could look like and what role innovations from the technology fields of sensors, lighting and visualization play in this.



The design of the interior creates a unique driving experience: When getting in the vehicle, the intelligent **Ambient Lighting** with integrated iRGB solutions automatically adapts to the driver's brightness and colour temperature preferences and creates a unique and individual lighting atmosphere in the interior. The improved colour homogeneity and accuracy, as well as the extended range of colours and brightness levels, provide a lighting experience which offers an increased level of brightness, performance as well as maximum comfort.

The **Hands-on Detection** function, which reliably detects touches and movements even under changed conditions (such as wet hands or gloves), provides more safety while driving and intuitive interaction between the vehicle and its occupants. **Capacitive Sensing** continuously checks whether the driver's hands are on the steering wheel.

The **Interior Signaling** function, integrated into the A-pillar, warns the driver about dangerous situations (such as blind spots) by lighting up brightly. A traffic light system lights up to make loading and unloading the vehicle safer.

When you leave the vehicle, the **In Cabin Sensing** function scans the vehicle interior. In addition, **Occupancy Monitoring** ensures that there are no more people in the vehicle before the interior is

disinfected using the latest **UV-C LED** technology. This protects against germs and the „CitySnap“ is ideally prepared for the next passengers.

Intelligent lighting and sensor solutions are also integrated on the exterior of the „CitySnap“: The **Rear Combination Light (RCL)** combines up to four different lighting functions in a single lighting solution, enabling dynamic rear lighting in a wide range of styles and colours.

The **Adaptive Driving Beam (ADB)** is integrated as a revolutionary headlamp design for high and low beam. It offers designers more freedom and the possibility of using low-cost PCBs and reduces the effort for thermal management as well.

For safety applications and decorative purposes, **Micro Lens Array (MLA)** projection technology is incorporated into the exterior of the „CitySnap“. Both a narrowly focused beam of light and patterns and writings can be projected onto the ground, enabling a new type of communication between vehicles and pedestrians.

For more information about our mobility concepts and lighting and sensor solutions, please visit <https://ams-osram.com>



AUTOMOTIVE
INTERFACE
SOLUTIONS

BCS Automotive Interface Solutions

BCS Automotive Interface Solutions (BCS) is an automotive supplier specialized in HMI (human machine interface) solutions to enable a unique user experience in smart and intelligent car controls – combined with innovative and advanced technologies.

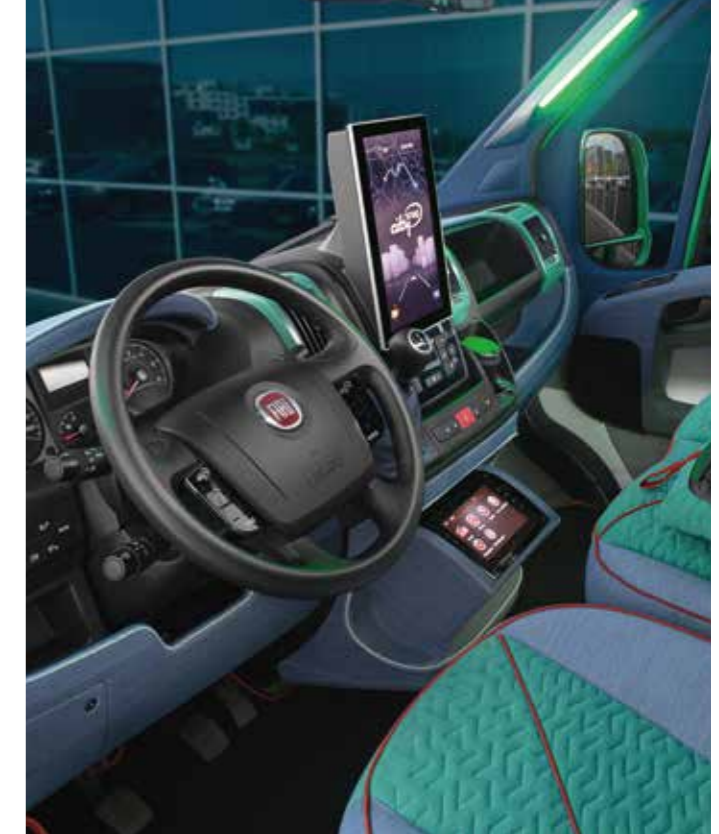
SMART VEHICLE CONTROL VIA TOUCH SENSITIVE STEERING WHEEL SWITCHES

BCS is providing innovative and smart vehicle control via advanced switches in the steering wheel in the latest Rinspeed project, the CitySnap. BCS' control device offers the opportunity for free configuration of special functionalities beside the functionalities like for example: volume, take and decline a call, search and mute.

It creates the right modern and lean appearance to fit into a forward-looking mobility project as such the CitySnap is understood. The seamless surface is touch sensitive and gives active haptic feedback to the driver. The well-rounded balancing among actuators, force sensors and the respective software results in an intuitive and safe operation of the various functions at the same time.

Advanced production technologies including in-mould labeling and sophisticated electronics complete the highly performing switch pair. BCS' HMI unites different touch sensitive based ways of control such as pushing and swiping. As long as the ignition is turned off the stylish, high-quality piano black paint surface stands for itself. Once ignition is turned on, all symbols appear thanks to the LED backlight. With the ignition switched on, all symbols are illuminated independent from the time of the day.

With its touch sensitive switches, BCS does not aim to develop and produce a functioning component for the steering wheel, but a true eyecatcher with unique user experience for the entire vehicle interior.



A LONG-STANDING HMI MARKET PLAYER REINVENTS ITSELF

BCS looks back to a history of more than 70 years in the automotive market. Since the late 1970s it always formed part of big corporations. It was formerly ZF TRW's Global Body Control Systems business and was acquired by Luxshare in April 2018. Luxshare Group founded in 1997 in China, has grown more than 60% over the past 10 years to become a billion-dollar company listed in the Shenzhen stock exchange.

Since the acquisition by Luxshare, BCS operates as an independent company in the automotive market. It has about 3,600 employees and footprint across ten countries on three major continents, North America, Europe and Asia Pacific. BCS is specialized in the development and production of HMI in the vehicle interior covering areas like the steering wheel, the instrument panel and the door.

With the change to a mid-sized company, BCS has been developing itself towards an organization with less complex structures and with a stronger hands-on mentality promoting more agile technology developments, fast decision making and ownership across the entire business. This continuous transformation to focus on flexibility, but at the same time on robust processes, supports BCS strongly in the ever changing conditions that the automotive and mobility industry sees these days.

UNIQUE COMBINATION OF EXPERTISE IN CONSUMER ELECTRONICS AND AUTOMOTIVE

BCS' owner, Luxshare, is a global solution provider for the design and manufacturing of components, modules and systems. Its products, which include wireless charging, audio, acoustics module, interconnect, accessories, haptics, antenna, have wide range of applications, specifically in the consumer, automotive, and enterprise/telecom space.

With the advancements in digitalization, connectivity and automated driving, Luxshare's expertise in consumer electronics and BCS' capabilities and knowhow in automotive interfaces form an exceptional combination of technological, processual and organizational knowledge, completed by a operational global footprint.

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BORBET

LEICHTMETALLRÄDER

**For CitySnap,
BORBET once again delivers
the optimal wheel – just-in-time.**

As a modular e-vehicle, CitySnap offers a solution that can be implemented at short notice for innovative, sustainable and efficient delivery. Just-in-time, BORBET supplies the light alloy wheels optimally designed for heavy loads. As in many previous projects before, the Swiss think tank Rinspeed also relies on MADE IN GERMANY and the special design and product quality of the wheel experts from the Hochsauerland region.



PASSION FOR LIGHT METAL

The family-owned company BORBET can look back on more than 130 years of tradition and experience in metal processing. Since 1977, the focus has been on the development of high-quality light alloy wheels, with which the company has established itself as one of the leading international manufacturers. Today, BORBET is with about 4,500 employees, eight ultra-modern locations and approximately 17 million wheels produced annually, a competent partner of over 30 automotive producers and the international specialist trade. BORBET attaches great importance to customer orientation as well as the areas of engineering, production and sales processes. For the eighth time in a row, Rinspeed is relying on the experience, flexibility and innovative technologies of the light metal expert. This joint passion is once again setting the future of mobility in motion.

MOBILITY OF TOMORROW

BORBET light alloy wheels are more than just attractive accessories: they are convincing thanks to their outstanding driving characteristics and advantages in individuality, weight and aerodynamics. A modern wheel must meet future mobility requirements in terms of design, efficiency, safety and durability. Also aerodynamic properties are becoming increasingly important: There is still valuable potential here in terms of energy efficiency and range. Continuous, customer-oriented new and further developments are a top priority at BORBET.

UNMISTAKABLE WHEEL DESIGNS

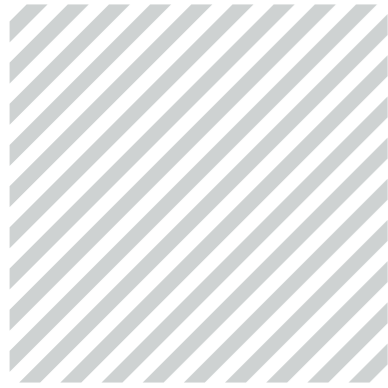
In addition to its technological expertise, BORBET scores with its unmistakable design language and sure sense of trends. In the BORBET wheel range, customers will not only find products from the Classic, Sports and Premium categories, but also wheels for the rapidly growing Commercial Wheels segment. From pick-ups, motorhomes, caravans, campervans to vans: these „Commercial Wheels“ master every challenge.

BORBET CW5: THE CLASSY RESILIENT COMPANION.

The BORBET CW5 combines a stylish look with the resilient virtues of a commercial wheel. With its 10 concise double spokes, the Design CW5 proves how stylishly BORBET masters even high wheel loads. The CW5 design in 7.5x18 inch and the enormous wheel load of 1,400 kg is the technically perfect companion for the CitySnap. The „mistral anthracite polished glossy“ colour finish also excellently sets the scene for the new concept vehicle. The BORBET CW5 with its dynamic design is available with a choice of surface finishes and shows once again that impressively high wheel loads can be realised in such a stylish way and that wheel dreams can become reality.



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Building a better working world

A key step on the „last mile“ towards the mobility ecosystem of the future

Ever since the very first moon landing 50 years ago, we have known how essential the „last little step“ is for a successful mission. The same principle applies to solving the critical „last mile“ steps towards the mobility ecosystem of the future. Today, this issue is no longer related to future visions or theories but concerns how such ecosystems will be implemented on our streets and roads.

Autonomous driving is a key technological enabler of the Rinspeed Snap family and a crucial part of the modular vehicle concept at large. This technology enables a wide range of attractive use cases. By separating the autonomous driving skateboard from pods tailored to each use case, asset utilization can be optimized, which in turn leads to more attractive business models. That, at least, is the theory. After all, despite the allocation of a wealth of resources to the development of sensor technology and software, fully automated (L4) or driverless (L5) concepts will not be mature and ready for use beyond test operations until the second half of this decade at the earliest.

But does this mean that modular vehicle concepts have to wait for virtual drivers to evolve? Rinspeed’s CitySnap gives a resounding answer to this question: No! Use cases for modular vehicle concepts already exist today and can be implemented with a human driver. This also enables important learning opportunities with regards to the automation of „secondary“ driver tasks. Therefore, early adopters will gain a significant advantage as they seek to further develop ecosystems and business models.

MOBILE PARCEL STATION AS A DECISIVE STEP TOWARDS MASTERING THE LAST MILE

The last mile logistical challenges of parcel delivery illustrate this particularly well. A tension has formed between the requirements of logistics service providers, customers/end consumers and cities/municipalities, one which needs to be resolved. Moreover, this urgency is increasing because the e-commerce boom is being accompanied by a growth in delivery volumes, which has been further accelerated by the COVID-19 pandemic.

On the one hand, logistics service providers must cope with a sharp increase in parcel volumes while operating under a significant margin pressure. In addition, there are operational challenges such as driver availability or the creation of acceptable working conditions. Moreover, customers are placing ever higher demands on innovative solutions. They expect fast and smooth delivery, ideally on the same day. Furthermore, as a result of the COVID-19 pandemic, contactless parcel delivery is increasingly expected without any accompanying risk of shrinkage. In addition, consequent increases in inner-city delivery traffic complicate the traffic situation and worsen air quality. This has led to greater regulation, as well as more stringent emissions requirements and penalties administered by public authorities.

CitySnap’s new mobile parcel station offers an innovative, pragmatic and efficient solution to these pressing last mile challenges. The solution aims to provide numerous benefits for potential stakeholders of the mobility ecosystem of the future:

Logistics service providers

- Fewer delivery vehicles and drivers needed since higher delivery volumes are possible
- A reduction in the average cost per package
- Increased job attractiveness through reduced complexity (loading/unloading, routes) and smoother working conditions

Customers/end users

- Increased flexibility through additional parcel station offerings and better everyday integration
- Contactless delivery options

Cities/municipalities

- A reduction in delivery traffic in city centers
- Reduced CO2 emissions through more efficient processing

As we move from vision to execution, the following three questions are key:

- What will the future ecosystem look like?
- Which players need to be considered when building the ecosystem?
- What are the important success factors for a functioning ecosystem?

Leaders in this field must consider the various and conflicting interests of potential stakeholders when building this ecosystem and enter relevant partnerships at an early stage. This also raises the question of which operating model and platform would be most suitable for CitySnap. Above all, it is important to choose a structure and governance that is attractive for the architects of the project on the one hand while simultaneously ensuring that it has the capacity to expand by bringing in an increasing number of partners. Clear ground rules and trust are necessary, as are new management approaches and the right mindset. After all, participation in the future ecosystem and exploitation of its potential will only take place on the condition that companies open up and make relevant IP available to partners or allow them a share in the value that is created.

In addition, scaling and expansion to further use cases should be considered from the beginning. Studying recent developments in the field of mobility services reveals that the concept of „T-shaped integration“ represents a suitable approach for the successful development of platform business models. This involves initially implementing and further

developing a selected use case with a clear focus and due diligence. Following this, experience and the customer base together form the foundation for the development of horizontally affiliated business areas.

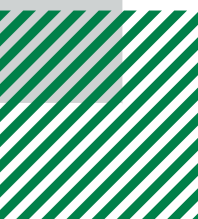
Consequently, the motto for launching an autonomous and modular ecosystem is „think big, start realistically and hit the ground running“. The deployment of the CitySnap on the last mile therefore represents the achievement of a decisive milestone here: a „small step“ in implementation, but a „big leap“ into the mobility ecosystem of the future.



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Falken Tyre Europe

The automotive industry is undergoing a huge transformation, and companies such as Rinspeed are among the trend setters in this period of change. Just one more reason for Falken to contribute to shaping the future of the car and the mobility of tomorrow with its innovative tyres, developed and manufactured using the latest technologies and tested on the toughest road surfaces in the world.

FALKEN. TYRES FOR EUROPE

Falken Tyre Europe GmbH is the European subsidiary of the Japanese tyre manufacturer Sumitomo Rubber Industries Ltd. (SRI), the fifth largest tyre manufacturer in the world with just under 40,000 employees. Its tyres are manufactured across twelve plants which produce approximately 250 million tyres per year.

Based in Offenbach am Main, Germany, Falken Tyre Europe markets and distributes a complete range of tyres for cars, trucks, light commercial vehicles and SUVs for both original equipment and the European retrofitting market. This also includes a network of approximately 8,000 tyre partners across Europe with responsibility for the sale and fitting of its premium products.

DEVELOPED AND MANUFACTURED WITH THE WORLD'S LATEST TECHNOLOGIES

SRI, which is based in Japan, has been manufacturing tyres since 1944. In addition to its two existing manufacturing locations in the company's country of origin, additional tyre plants have been established in Thailand, Indonesia, Brazil, South Africa, China and the USA during the course of the company's global success. In 2019, the global annual production of tyres for all categories of vehicle amounted to 66,850 tonnes – a number which is also increasing.

The tyres are developed using the latest technologies. In 2017, SRI introduced a "Smart Tyre" development concept for tyre technologies, consisting of three pillars: "Safety" technologies focus on the safety of the tyre, "ENASAVE" technologies ensure that the tyres make a positive contribution to the environment in addition to the advantages that they offer in terms of safety. In the "Core" technologies, the latest simulation tools and analysis are applied, which also support all the research and development work. For example, ultra-modern super-computers simulate, at nano level, the behaviour of the rubber compound throughout a tyre's life. This insight supports the engineers to develop the optimum compound to perform for longer.

Falken's parent company has received the "Tyre Technology Award" several times. The most recent accolade was for its "Sensing Core" technology, which detects dynamic tyre and vehicle data, current tyre grip while driving and the detection of road conditions. All of this can be stored in the cloud to analyse at a later date. In this way, a simple tyre becomes a highly sensitive sensor. On the basis of these advances, Falken tyres can more than meet the demands of the mobile society of the future in terms of the balancing of safety and environmental concerns.



HIGH-TECH TYRES FOR ELECTRIC CARS

Low rolling resistance, the best possible traction on all surfaces as well as the ability to withstand high loads are some of the specific requirements for electric car tyres. The prototype "CitySnap" – an electrified FIAT Ducato – uses two types of Falken tyres. In the summer it's the all-season Falken WILDPEAK AT3WA tyre, and in winter, the Falken EUROWINTER HS01 SUV tyre, all in the 265/60R18 size.

The Falken WILDPEAK AT3WA, an SUV and 4x4 tyre, offers the performance of an off-road tyre at the same time as having the high level of technological development usually seen in a road tyre. An optimised tyre tread with centre ribs in the zig-zag design and the open design of the tyre's shoulder provide excellent self-cleaning qualities and therefore superior traction. Thanks to the deeper tread depth, the tyre can last longer, eking out more life.

During the development of the Falken HS01, development engineers sought to achieve exceptional grip in snowy, icy and wet conditions, top-quality aquaplaning resistance and a high degree of directional stability, regardless of the weather conditions. In both the WILDPEAK AT3WA and the EUROWINTER HS01 SUV, proprietary 4D nano-design simulation



technology helped the engineers to achieve the tricky balance of both grip and wear resistance. The blend of performance and sustainability underlines why Falken tyres are the perfect match for the CitySnap.

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Homepage	www.falkentyre.com

GENTEX CORPORATION

Today's Features – Tomorrow's Technology



GENTEX TECHNOLOGY FOR CITYSNAP

- **Full Display Mirror®** – an intelligent rear-vision system that uses a custom camera and mirror-integrated video display to optimize CitySnap's rearward view.
- **Vehicle Docking Camera System** – Gentex custom cameras to help CitySnap align at the docking station for delivery and pickup of the portable locker units.
- **Locker Chemical Detection System** – new nanofiber sensing technology to detect dangerous substances left within the locker units.

GENTEX CORPORATION

Gentex is a long-time supplier of electro-optical products for the global automotive industry. We supply nearly every major automaker with advanced electronic features that optimize driver vision and enhance driving safety. We have focused competency in digital vision, connected car, and dimmable glass systems.

Since our inception, Gentex has managed the evolution of rear vision. We've turned the mirror into a strategic electronic module – a delivery mechanism for advanced vision-related features, including cameras, displays, alerts, transaction modules, car-to-home automation systems, and security components.

As vehicle electrification and autonomous driving trends progress, our core technologies are converging to yield products that provide unprecedented advances in digital vision and stand to become integral components in connected cars and future mobility systems.

THE FULL DISPLAY MIRROR

Enhanced Vision for Light Commercial Vehicles

The Full Display Mirror® (FDM®) is an intelligent rear-vision system that uses a custom camera and mirror-integrated video display to optimize a vehicle's rearward view. The system captures video from the rearward-facing camera and streams it to a unique, mirror-integrated LCD that provides the driver with an unobstructed, panoramic view behind the vehicle. Light commercial vehicles today provide drivers with very little to no rearward visibility. CitySnap and other cargo vans are often loaded with equipment or passengers that hinder rearward vision. A majority also have windowless rear doors, partitions or enclosed cabins that render traditional interior mirrors useless and force drivers to rely only on their exterior mirrors, which provide a limited field-of-view.

The digital mirror provides the CitySnap driver with an unobstructed view behind the vehicle, making it easier to spot pedestrians, cyclists, and rearward-approaching vehicles. It also gives drivers confidence in their driving tasks – changing lanes, reversing, parking, turning, docking, etc.

System Benefits:

- Provides an unobstructed, panoramic view behind the vehicle
- Optimum visibility in both daytime and nighttime
- Confidence to spot pedestrians, cyclists and rearward approaching vehicles
- Reduce costs associated with accidents and repairs
- Potentially lower insurance premiums
- Increase in commercial vehicle uptime

For CitySnap and fleet management operators, the FDM dramatically improves the rearward visibility of their light commercial vehicles, which increases safety and vehicle uptime while reducing the costs associated with accidents and repairs.

VEHICLE DOCKING CAMERA SYSTEM

Central to CitySnap are mobile locker units that are transported, delivered and "hot swapped" to parcel stations throughout the city. Because autonomous driving has not yet been realized, CitySnap has been initially designed for a human driver. In order to assist the driver in the efficient delivery and pickup of the locker units, Gentex equipped CitySnap with a custom camera system that helps the driver align the vehicle at the docking station. The camera video is fed to an interior display with corresponding overlays, which the driver can monitor to perfectly align the vehicle.

LOCKER CHEMICAL DETECTION SYSTEM

As mentioned, CitySnap's mobile locker stations are transported, delivered and "hot swapped" to mobile parcel stations throughout a city, delivering everything from parcels and packages to food items and construction supplies. To help monitor the mobile lockers and prevent the potential transport of dangerous substances, Gentex equipped the lockers with its Vaporsens chemical detection units, which utilize machine olfaction – a digital sense of smell.

The core of the Gentex Vaporsens sensor technology is a net of nanofibers approximately one thousand times smaller in size than human hair. Their porous structure allows them to absorb targeted molecules from sampled gas and identify them via changes in their electrical resistance. The technology allows for the rapid detection of target chemicals with high sensitivity in the parts per billion and parts per trillion ranges.

These locker-integrated units continuously sample the air within the ventilated locker stations and are capable of detecting a wide range of airborne contaminants, including smoke, explosives or incendiary components, biohazards, illicit drugs such as marijuana and Fentanyl, spoiled food, pollutants and other hazardous substances.

Gentex is a proud sponsor of Rinspeed's CitySnap. With core competencies in microelectronics and vision systems, chemical development and coatings, software design, displays, glass processing, and automated assembly, we stand ready to help customers integrate today's features using tomorrow's emerging technology.



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Automation by innovation.

Smart KePol parcel lockers: Maximum flexibility for delivery and pick-up

Automated 24/7 available parcel and goods transfers have become an integral part of our modern society. This isn't just because of the rising parcel volumes due to steadily growing e-commerce, but is also due to the increasing demand for ever more flexibility – both at work and at home.

The starting signal for automating the first and last mile of parcel delivery was given in 2001, when KEBA piloted the first parcel lockers together with the German DHL. Since then, a great deal has changed ...

YOUR RELIABLE PARTNER FOR AUTOMATED HANDOVERS

With over 17,000 KePol parcel lockers sold (as of June 2021), KEBA is the European market leader. Extensive experience from different countries around the world is the basis for in-depth knowledge and unique innovations. That makes KEBA the ideal partner for smart automation solutions around the contactless handover of parcels and goods.

UNIQUE FLEXIBILITY AND QUALITY

Leading postal, logistics and e-commerce organizations worldwide rely on the smart KePol parcel lockers. The decisive factors for this are their outstanding reliability and flexibility. Companies benefit from uniquely high availability, which is reflected in satisfied customers and minimized costs. Furthermore, the individual adaptability of KePol parcel lockers allows optimal use of available space. This guarantees the maximum parcel compartment density for every single location.

A WIDE RANGE OF APPLICATIONS

The KePol Software Suite offers the ideal solution for every requirement. It can be easily integrated into existing IT environments and supports use cases such as first & last mile processes, multi-logistics company solutions, click & collect and many more.

THE RIGHT CHOICE FOR EVERY LOCATION

KePol parcel lockers have a modular design and can be flexibly adapted to any requirements and conditions. According to the designated installation, there are models designed specifically for indoor areas, as well as weatherproof variants for outdoor areas. More compact variants are available where space is limited or for smaller installations directly at the recipients or on (or in) vehicles.

All KePol lockers have one thing in common – they are uniquely robust and reliable and offer maximum security against burglary and vandalism.

FIT FOR THE FUTURE

KePol parcel lockers are also available in cost-optimized eco-variants. These omit a touch display, so operations are carried out directly on the smartphone of the user. Upon request, KePol eco models can also be equipped with photovoltaic panels and batteries. This makes the lockers electrically self-sufficient and enables an even more cost-saving operation.

Furthermore, special installation equipment for outdoor installations is also available. This allows even faster installation and minimizes costs and the effort required for location preparation.

The innovative KePol FLEX models offer even more flexibility. These have a battery and do not require any cabling. Thanks to their stable concrete base, they can be installed on suitable surfaces and put into operation immediately without preparing the location.

The sophisticated overall KePol concept with its extensive product range enables the easy and quick entry into the modern world of the automated handovers of parcels and goods.



ABOUT KEBA AG

Founded in 1968, KEBA AG from Linz/Austria is an internationally successful automation company with numerous subsidiaries across the globe. KEBA relies on the motto "Automation by innovation". For over 50 years, the company has developed and produced high-quality automation solutions for industry, the banking and services sector and the energy sector. Decades of experience, professional competence and the courage to go one step further have made KEBA a technology and innovation leader in its business areas. KEBA customers can rely on the highest level of development expertise and in-depth production knowledge. Highest quality and reliability are guaranteed

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Printing at the cutting edge.

To be noticed, you need to do more than just establish a content-related presence. You also have to set yourself apart from your competitors in visual terms and stand out from the masses. If you're looking for standard products, you'll naturally find them in our range too. Where **individual solutions** are to be strikingly different, where competent advice and planning beyond the pure printed product is required, or where a quick and flexible response to time-critical challenges is needed – we can make full use of our Kern core competences in all of those situations and help you to achieve a successful presence.

As a **full-service provider**, Kern offers you a complete range from a single source – from concept creation and design to offset printing, from digital and large-scale printing to complete print post-processing, and from print finishing to the shipping process.

Kern – embodying **more than 150 years of printing tradition** and experience, combined with a motivated team and the latest technologies.



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Offset printing

Digital printing

Large format printing

Direct mailing

Graphic design

Your Best Partner in Automotive Business

MOSOLF Move-Tec GmbH is part of the MOSOLF Group and comprises the special vehicle construction and electromobility divisions. MOSOLF has been a leader in special vehicle construction, BOS radio and component construction for over 30 years and a specialist for electromobility since more than 10 years.

We are body manufacturer for car manufacturers and public authorities, provide solutions for prototype construction as well as production of small series and full series, produce emergency vehicles for public authorities and organisations with security tasks (such as police, fire department, emergency management), offer special series for manufacturers and dealers, offer convert to alternative drive technologies (electric, liquefied petroleum and natural gas), truck conversions, special solutions and underbody changes of trucks from series production. As a manufacturer we produce electric compact utility vehicles in Herne, Germany.

Within the innovative CitySnap project, MOSOLF Move-Tec GmbH supports the think tank Rinspeed with its expertise in custom vehicle conversion and building components. Today every single customer usually has to pick up parcels with his car at individual, permanently installed packing stations. The CitySnap concept vehicle shows a change of direction – towards the customer. This increases delivery efficiency and reduces emissions and traffic volumes.

Based on a Fiat eDucato, Move-Tec is customizing the CitySnap from scratch to integrate the locker stations and all the electric components. With a fully electric swapping mechanism inside the CitySnap as well as in the locker station platforms, the locker stations can be exchanged easily and within a short time.

MOSOLF Group

The MOSOLF Group is one of the leading system service providers for the automobile industry in Europe. The range of services at the family business, which was founded in 1955 and has its headquarters in Kirchheim unter Teck, Germany, includes tailor-made logistics, technical and service solutions. These are provided using a network of business sites across Europe and a multi-modal fleet that combines different means of transport.

The spectrum of services provided by the MOSOLF Group covers the complete value-added chain for automobile logistics: ranging from the end of the production line to recycling. In addition to transporting vehicles (cars, light vans, high & heavy vehicles), workshop services, special vehicle construction, industrial paintwork, mobility services, releasing agent services and vehicle recycling are all part of the portfolio of services.

Within this context, MOSOLF provides all-round, customised solutions for the automobile industry, fleet operators and dealers from one source and also handles the associated data flow using modern software solutions.



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OBE KINEMATICS

**Taking care
of the user!**

OBE KINEMATICS

A family company associated to the Hettich Group, founded almost 60 years ago in Aizarnazabal, a small town in the Basque Country (Spain). OBE Kinematics is a business experienced in mechanisms with the focus on generating comfort, ergonomics and versatility through solutions for applications and spaces. It therefore works with specialised engineering based on a cross-cutting concept enabling it to offer the complete process: from technical development to industrialisation, production and logistics. OBE Kinematics, Powered by Hettich, is a business specialising in simple and complex kinematics for markets such as furniture, household appliances and the automotive sector, cross-cutting these sectors where the extensive know-how of the Hettich group consolidates its market proposal.

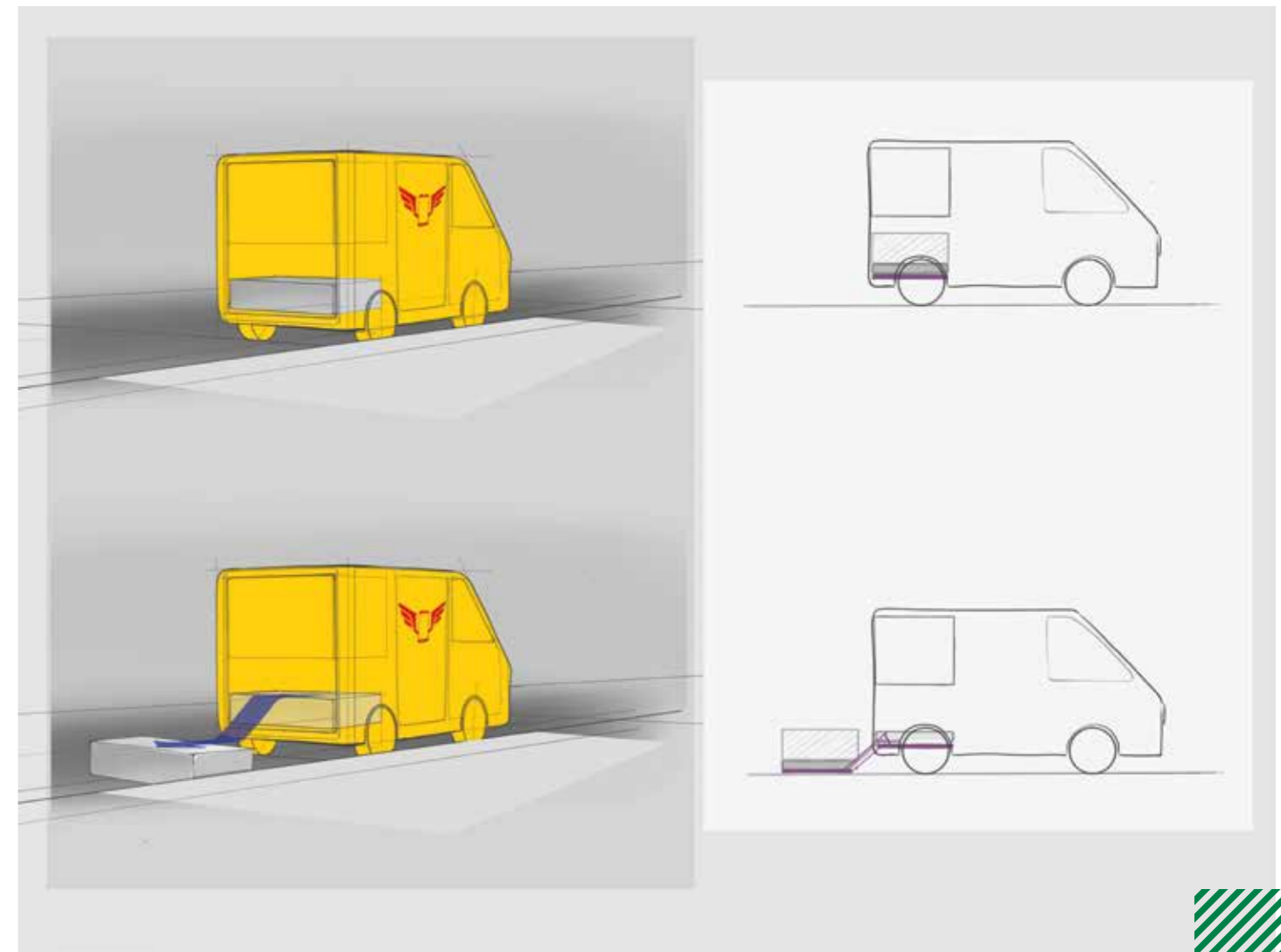
HETTICH INTERNATIONAL

The Hettich Group (www.hettich.com) is also a family-owned business with a history spanning more than 135 years, a leader and innovator in the global furniture, kitchen/bathroom and office furniture sector. Last year, 2020, it closed with a turnover of €1.1 billion and 6,600 workers worldwide, 3,500 of them in Germany. It has factories specialised in different technologies, from the die-casting of plastic, zamak, magnesium, thixomoulding, automatic profiling... developing its own machines and processes in Europe, Asia and the USA.

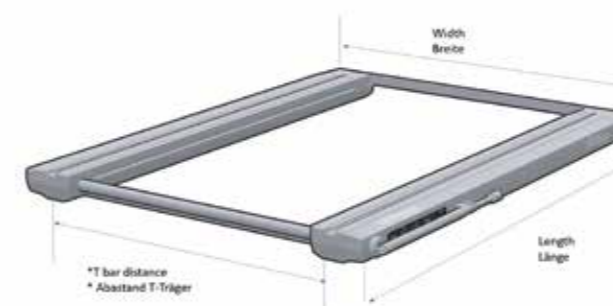
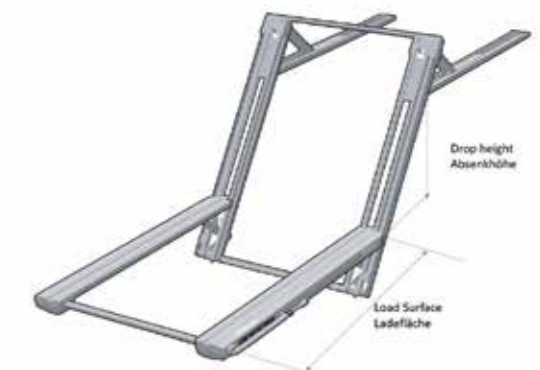
DROPDOWN

DropDown is the proposal presented by OBE Kinematics as the integration of futuristic concepts for Rinspeed. Based on its knowledge of the technique, it develops a kinematic system to ergonomically improve the experience of loading and unloading the content of commercial vehicles. DropDown challenges the laws of physics to make better and more versatile use of the vehicle interior and facilitate access to its load, protecting the user's health when going about their activities and making the design more comfortable. DropDown is a kinematic system in the shape of a mobile loading platform which enables access to the objects and loads you want to carry inside your vehicle. Thanks to its design, the load can be moved effortlessly from the interior to waist or ground level, meaning that it can be mechanically handled.

DropDown makes the most of the complete space available inside the vehicle and makes the interaction pleasant, healthy and user-friendly. The mobile platforms also provide personal protection at all times.



DESCRIPTION	VALUES
Load capacity	75 Kg
Weight	29 Kg
Width	140 cm
T bar distance*	*85 cm /variable
Total width	*103 cm
Load surface	103 cm
Drop height	70 cm



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PRETTL

lighting & interior

Intelligent and Innovative Lighting Systems from PRETTL lighting & interior for Tomorrow's Mobility

Trends not only influence people's buying behavior in the area of consumer goods, but the so-called megatrends also result in new requirements for the automotive world. Not only new drive methods play a special role here, but also the basic use of the automobile. In addition, global online trade is booming, which means that new and innovative delivery solutions are needed that can, above all, be hygienic and contactless. Based on these findings, Rinspeed presents the concept vehicle „CitySnap“, which presents possible solutions for sustainable and efficient delivery.

Due to these trends, requirements in the field of vehicle lighting are also changing. Rinspeed relies on innovative product solutions from PRETTL lighting & interior, which is paired with modern LED technology from Osram.

On the one hand, logo projectors are used in the interior and exterior, with which it is possible to project a variety of graphics and effects. These projectors are used not only for safety and styling aspects, but can also be used for advertising purposes.



Secondly the CitySnap uses taillights that are based on LED technology and feature a 3D depth effect. A display is integrated into the rear lights, which enables intelligent communication between road users. For example, the vehicle's loading and unloading status or warning signals can be displayed.

ABOUT PRETTL LIGHTING & INTERIOR

PRETTL lighting & interior (PLI) offers a complete package of sophisticated, high quality lighting and complex plastic modules and systems for vehicle interiors and exteriors.

From the initial idea and design stages all the way through to series production and spare parts delivery. Every sector benefits from the expertise gained at every stage. This expertise makes itself especially felt in the effective way in which the various value-added processes combine together.

PRETTL LIGHTING & INTERIOR FOR YOUR SUCCESS

The core competences of the company are development and manufacturing, finishing as well as assemblies for automotive lighting applications for interior and exterior. The affiliation to the PRETTL group provides us with unique possibilities of using its group synergies and make them accessible to our customers.

THINK GLOBAL. ACT LOCAL.

With the PRETTL lighting & interior you have a strong partner at your side – always and everywhere. Understanding cultural differences and the distinct features of regional markets is of vital importance for international activities. This understanding and the enjoyment we have in developing innovative technological solutions ensure our customers a competitive edge in national and international markets.



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Combined expertise with focus on future mobility trends

FoamPartner and Recticel combine their competencies and strengthen their position as a global supplier of industry leading foam solutions. In the new business line Recticel Engineered Foams, they present an expanded portfolio for tomorrows mobility. Tailor-made, innovative and sustainable.

With over 2,700 employees at 34 locations on 4 continents, Recticel Engineered Foams meets customer needs along the entire value chain for a wide range of applications in the mobility, industrial, medical and comfort sectors. With holistic service and individual product solutions ranging from system formulations and foam sheets to semifinished and finished components, everything is now available from a single source.

CUSTOMIZED SOLUTIONS FOR INDIVIDUAL NEEDS

Individual solutions for our customers are realized through close assistance from the problem definition to the finished result: The development of a design to meet requirements based on the technical inquiry is followed by feasibility studies and the production of prototypes. These are put through their paces in the company's own laboratories and acoustic centers and then optimized for series production using our own or customer tools. After OEM/Tier1 approval, series production is carried out according to specification and in compliance with IATF 16949.

FOCUSED ON MARKET TRENDS

Sustainability and the reduction of emissions and fuel consumption are the essential features for development projects of vehicle manufacturers. These topics also accompany us in our daily work: Lighter components, the use of more environmentally friendly raw materials and optimized functionality are the basis of our foam development.

As one of the leading partners for the automotive industry, we deliver innovative solutions for demanding acoustic and thermal environments in vehicle interiors, engine compartments, underbodies and trunks.

SUSTAINABLE PRODUCTS FOR FORWARD LOOKING VEHICLES

In our portfolio, we consistently look to sustainability and implement this in a comprehensive manner, whether in special mobility interior foams or lightweight components for car bodies. Our offering ranges from foam blocks to sophisticated prefabricated components, such as engine hood absorbers.

OBoNature™ product family

The OBoNature™ portfolio includes various product versions for use in vehicle interiors, including headliners, car seats, door panels and armrests. All products are based on sustainable raw materials, have low emissions and are particularly durable thanks to outstanding hydrolysis stability. Their excellent laminating properties guarantee optimum processing results.

RegiSeal® Acoustic SMS

This low-emission foam based on novel prepolymer technology was specially developed for acoustic isolation in vehicle interiors. With optimized functionality, the ultra-light spring-mass system is an attractive alternative to conventional two component systems. It is used wherever structure borne and airborne noise has to be reduced, for example in gear shifting or in the dash inner encapsulation located between the engine compartment and the vehicle interior.

Silent Tires - Sound Absorber

Rolling noise is one of the main sources of disturbing sound in the interior of electric vehicles. Here, Recticel Engineered Foams has designed a new innovative silencing tire system based on cutting edge polyurethane foams. This can reduce noise in the vehicle interior by up to 11 dbA, making the tires twice as quiet as conventional ones. The product range is already being used by various well known automakers.

Damping for side fender

To reduce wind noise in the side fender, Recticel Engineered Foams has also developed innovative solutions. The result is a variety of side fender products for different acoustic requirements, made of thermocompressed material, die-cut polyethylene foam and molded polyurethane foam components with substantial insulating and sound absorbing properties.

Environmentally friendly innovations for today and tomorrow

From development to series production, sustainable thinking and action is always in focus at Recticel Engineered Foams, for new products as well as for the existing product line. In doing so, we always pursue the goal of developing innovative solutions with a convincing price performance value.

We foster a sustainable mobility of the future, tailor-made for the respective customer wishes and requirements.



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schoeller

the spinning group
An Indorama Ventures Company

Sustainable and Anti-Virus: NLS - Next Level of Sustainability

To respond to the core issue of sustainability, but also to the current Corona challenges, Schoeller has once again significantly expanded its development efforts in collaboration with the entire supply chain.

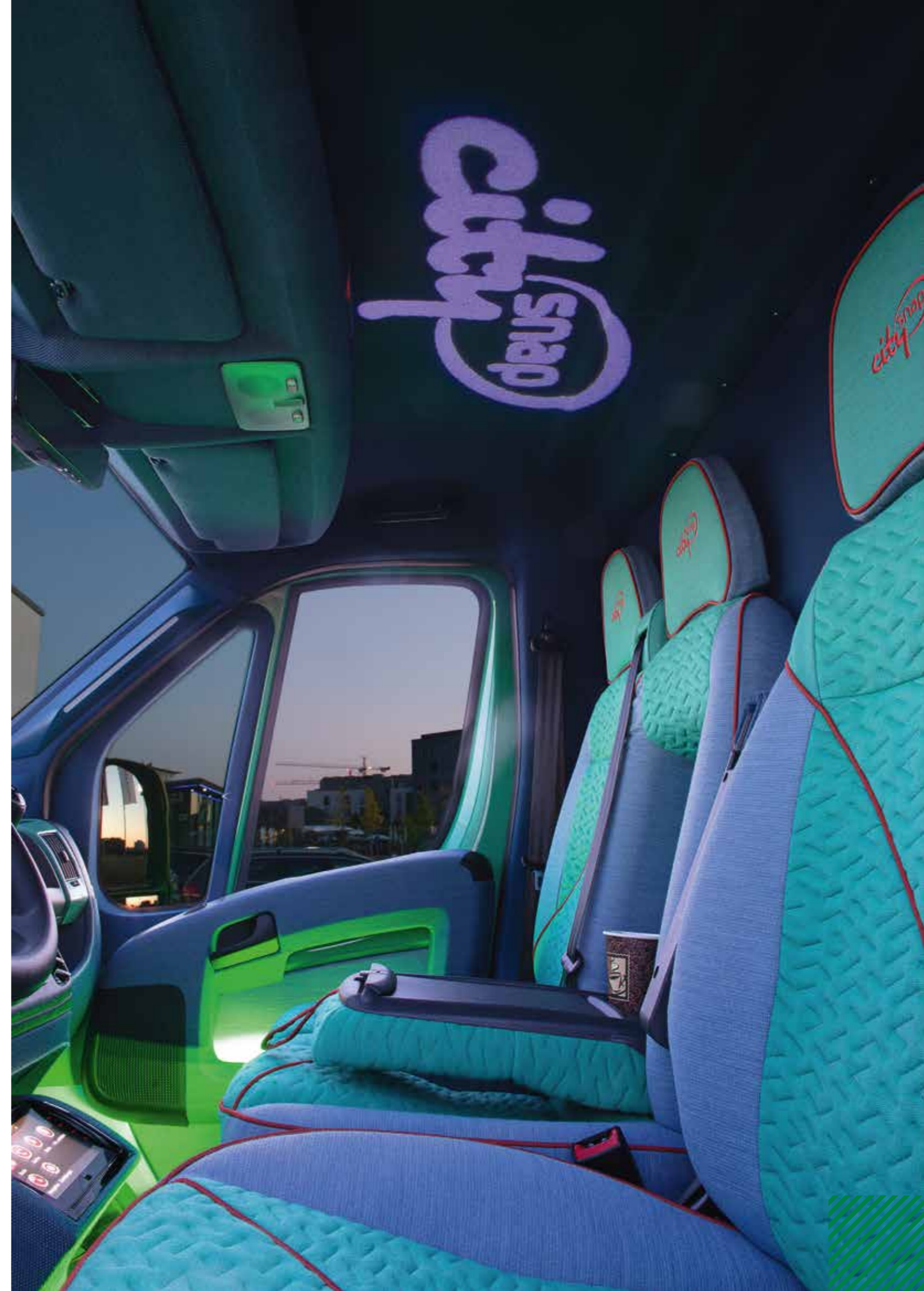
Two articles have been completely redesigned for the CitySnap project (article 54805 Nm 40/1 100 PES rec Fresh and 54806 and Nm 28/2 100 PES rec Fresh). The yarn allow a wide range of textile applications in the seat, headliner and trim areas. All needed colors can be covered, especially melange colors. The new sustainable polyester material is recycled from plastic bottles and finally spun into a high-quality worsted yarn. The recycled material is used from the German PET bottle deposit system. Thus, attention is paid to very short, Central European raw material sources and delivery routes. This significantly reduces the carbon footprint. To ensure full transparency in the supply chain, the yarn is supplied sustainably, with a GRS certification (Global Recycling System).

Since the pandemic has also changed the requirements in the area of public transport within the CitySnap project, the Schoeller development team has also looked for possible solutions here. The result: the yarn is given an additional „Fresh“ finish that has a virus-inhibiting effect. The technology has already been successfully tested in other markets. It significantly reduces the risk of viral infection that eventually emanate from contaminated textiles in public transport vehicles. Another small innovative step towards more sustainable interior solutions in the Schoeller **NLS** product range, the „**N**ext **L**evel of **S**ustainability“.

The Schoeller Spinning Group from Hard in Austria is one of the world's leading worsted yarn manufacturers. Around 500 employees produce approximately 3,500 tons of yarn per year at two locations in Europe. Schoeller is a company of Indorama Ventures Company (www.indoramaventures.com). A century and a half of experience and an innovative R&D department are responsible for constantly extending Schoeller's technological lead. Product developments and entrepreneurial activities are shaped by the principle of sustainability anchored in the company's mission statement. Schoeller has received many awards for its innovative work and commitment in this area.

In a nutshell: Sustainability + Innovation = Sustainnovation.

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STRÄHLE + HESS

**We live and breathe textiles
– and have done for 95 years**

Our desire to create exciting and emotional vehicle interiors never stops.

Around 460 employees knit and warp knit, dye and finish with passion and expertise in Althengstett, Bisingen, Aalen, Topol'čany (Slovakia) and Auburn (USA) for the unique character of your car. Our designers translate trends into textiles and develop compelling colour and material concepts. With our expertise and experience, we enrich the products of all well-known car manufacturers worldwide. As a reliable Rinspeed partner, STRÄHLE+HESS is once again shaping the textile interiors.

MOBILE

The rapid development of online trade in the past year calls for new, variable solutions. With City Snap, Rinspeed has developed a mobile packing station adapted to flexible needs. Based on a Fiat Ducato, the delivery vehicle scores with a globally tested, aviation-inspired swap system. City Snap could also be an attractive option for smaller businesses to expand their sales space if implemented as a mobile point of sale. In the fourth generation of the development, City Snap is now maturing into a series standard.



SUSTAINABLE

STRÄHLE+HESS focuses specifically on a sustainable concept with top hygienic conditions. In the interior, we experience a completely new kind of comfort. Schöller's staple fibre yarn used in all textile surfaces creates a feeling of well-being. The recycled polyester is compelling with an astonishingly soft, woolly feel and is thus surprising in a pleasant way. A fine colour melange creates a very natural look.

Almost all yarns used have been given a high-quality hygienic finish that virtually entirely eliminates bacteria and viruses.

The energetic mix of powerful, cool colours and vibrant red is invigorating and brings new verve. Our circular-knit fabric in the headliner and pillar is in a surprising dark blue covered with elegant diamonds – as a complementary context to the dashboard and door trim. There, three-dimensional surfaces of triangles are created from blue and light grey. Timelessly modern braided piping skilfully emphasises the lines in the dashboard.

The rhombus is a recurring geometric element in all textiles. The advanced design of broken diamonds functionally binds the padded flat-knitted material in the seat. This sustainable technique makes it possible to reduce the number of process steps previously necessary. The division of the flat-knitted fabric in the seat seems technical. Plain-coloured surfaces complement the contours of the seats and head restraints framed by the bright red, gently patterned piping.

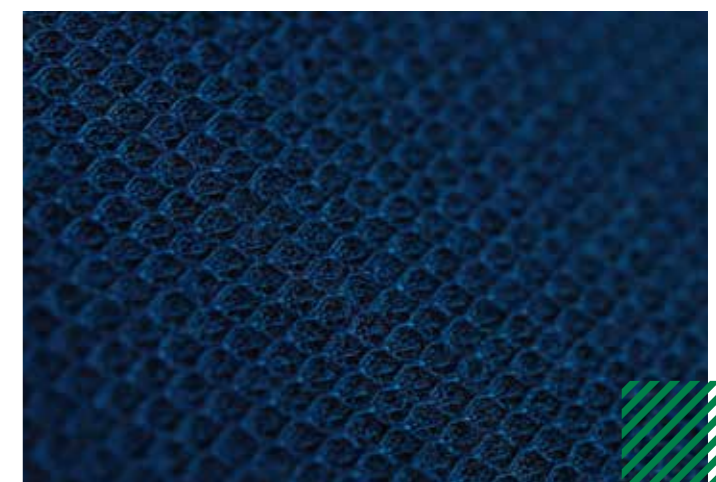
TEXTILE

Your goals become attainable with the textile products from STRÄHLE+HESS. Be inspired by our creativity and the diversity of design and structure options in the knitting sector. Join us and rely on the positive and sustainable characteristics of textiles. We are your experts whatever the knitting technology and will put all our efforts into finding solutions to your challenges.

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Shaping the future of Mobility with 3D Printing

The mobility and automotive industries are well-known for being fast paced. For manufacturers, they require technologies that can enable them to keep up with industry changes and customer demands, without compromising on innovation. For over thirty years, Stratasys technologies have helped manufacturers achieve cost-effective, on-demand production of customized parts with no geometric limitation – eradicating the need for conventional tooling, which is inherently costly to produce and requires long lead times.

MAKE IT WITH STRATASYS

Stratasys has been pioneering 3D printing technologies for over 30 years, solving design and manufacturing problems, and innovating how parts and products are made. Operating on a global scale, Stratasys supports key industry leaders across a plethora of industry sectors, among them automotive, mobility, aerospace, consumer goods and healthcare. Regardless of the industry, Stratasys’ goal is to make design and production faster, easier, better and less expensive with 3D printing.

AN IDEAL TECHNOLOGY FOR EVERY APPLICATION

Stratasys’ core technologies consist of PolyJet™ 3D printing and Fused Deposition Modelling (FDM®). Both are used by leading automotive and mobility companies every day to transform design and production in different ways.

PolyJet technology – the most advanced PolyJet system is the newly-launched Stratasys J850 3D Printer. The J850 is world’s only full color, multi-material 3D printer, and the only technology able to produce PANTONE-Validated™ color parts. The J850 enables rapid creation of concept parts and functional prototypes that look and feel like the final product, thanks to its unique ability to combine up to seven different materials in one print. PolyJet materials range from rigid to flexible, transparent to opaque and more, with outstanding surface finish. Ultra-realism is the benchmark for PolyJet 3D printers.

FDM technology – enables engineers to produce tough and durable production parts with a range of industrial-grade materials, including those that meet ESD (electrostatic discharge) standards, as well as smoke, fire and toxicity requirements for mobility. Other properties include extreme strength and lightweightness, such as Nylon material. Within mobility, FDM is particularly well-suited for creating low volume spare parts for vehicles, enabling cost-effective customization or rapid replacement of obsolete parts.



SPEED UP PRODUCTION

Ideal for the mobility sector and particularly for the CitySnap, Stratasys FDM and PolyJet 3D printing enables the fast production of customized automotive parts for vehicle interiors and exteriors without the need for tooling. The CitySnap comprises a large amount of Stratasys 3D printed parts. These include the lighting fixtures, which are 3D printed in VeroClear material on the J850, as well as structural components produced in Stratasys’ Nylon12 material – supporting the CitySnap’s mission to combine lightweightness with durability. With Stratasys 3D printing, various elements of the CitySnap can be produced quickly, cost-effectively, and to exacting requirements.



3D PRINTING: THE MOBILE WAY TO PART PRODUCTION

Stratasys 3D printed parts featuring throughout the CitySnap concept vehicle, include:

Interior 3D printed parts:

- Carrier console for the radio
- Display frame

Exterior 3D printed parts:

- Bumper



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amun **OSRAM**

 **BOSS** AUTOMOTIVE
INTERFACE
SOLUTIONS

 **EY**
Building a better
working world

 **FALKEN**
TYRES

GENTEX
CORPORATION

 **KEBA**[®]
Automation by innovation.

 **kern** GmbH

 **MOSOLF**

OBEKINEMATICS

 **PRETTL**
lighting & interior

 **RECTICEL**
Engineered Foams

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